

WATER PERMIT NO. 2684-2

Name of Applicant: William Anderson

Address: PO Box 205, Kennebec SD 57544

Phone: 605 869-2496

Amount of Water Claimed: 93 acre-feet

Total Acres: NA

Source of Water Supply: runoff

Water to be used for: fwp, livestock water

County: Lyman

Type of Waste Disposal System:

Location: 8 miles northeast of Kennebec

PRIORITY

Date Received: 6-6-12

Application/License Fee: \$ 700.⁰⁰

Corrected Application Received:

Period of Annual Use: January 1 – December 31

Remarks:

Diversion Point: SE ¼ SE ¼ Sec 3-T106N-R75W

Water Impounded: SE ¼, SW ¼ NE ¼ Sec 3-T106N-R75W

Depth of Well: NA

Well Driller:

Remarks:

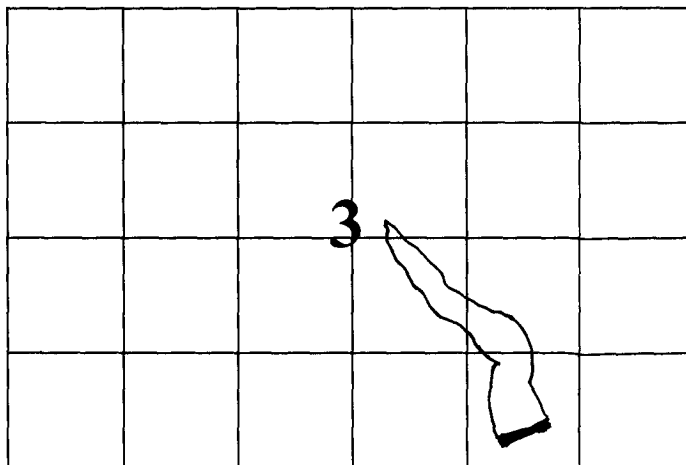
Type of Map:

Prepared by: Dave Konechne, PE

Reviewed and the Number Assigned on: 6-7-12

By: Karen Schlaak

Notice of Hearing - date to intervene: _____



FORM 2: Application for uses other than irrigation
(type or print)

Mail to:
PMB 2020
DENR - Water Rights
523 E Capitol Ave
Pierre, SD 57501-3182
ph. (605) 773-3352

(office use only)
No. 2684-2 Hydrologic Unit 10140104
Basin Missouri River
Newspaper Lyman Co. Herald P.O. Box 518 Preshe 57548
Capitol Journal P.O. Box 878 Pierre 57501

RECEIVED

JUN - 6 2012

WATER RIGHTS
PROGRAM

895-6397

Application For Permit To Appropriate Water Within The State Of South Dakota

Check use(s) of water:

☐ Municipal	☐ Suburban Housing	☐ Recreational	☐ Institutional
☐ Rural Water System	☐ Commercial	☒ Fish & Wildlife	☐ Geothermal Heat
☒ Domestic (over 18 gpm)	☐ Industrial	☒ Other <u>Livestock</u>	

Type of Application:
(check one)

☒ New ☐ Vested Right (Use predates Mar 2, 1955) ☐ Future Use Reservation
☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____
☐ Amendment/Correction to Permit No. _____

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.)

1. Name of Applicant William Anderson Phone 605-869-2496(check one) ☒ Owner ☐ Tenant/lessee

Mailing Address PO Box 205 Kennebec SD 57544-0205
(Address) (City) (State) (Zip Code)

2. Amount of water claimed _____ *CFS or _____ **GPM _____ 93 ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply Dry Draw Runoff

4. Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County Lyman
Dam is in the SE1/4SE1/4 section 3-T06N R75W. Water will be impounded in the SE1/4 and SW1/4NE1/4 section 3-T106N R75W.

5. County or counties where water will be used LYMAN6. Annual period during which water is to be used Jan 1 - Dec. 31

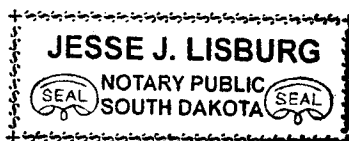
7. Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

The project will repair a dam with an original location notice (#1176-2-104 ac/ft) on 11/8/1949. Damage to the earthen spillway has occurred causing failure. The repaired pond will impound 18.1 surface acres and store 93 ac./ft. Engineering plans and specs are included with this application.

STATE OF SOUTH DAKOTA)
County of Lyman) SS

Attachments: Attach Form 2A if diversion is from a well or dugout, or if storage of water is proposed. Also, attach map and any other technical information. (see instructions)

I, William Anderson, the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.

Applicant's signature William K AndersonSubscribed and sworn to before me this 1st day of June 20 12

Jesse J. Lisburg
Notary Public signature

**SOUTH DAKOTA
WATER PERMIT NO. 2684-2**

Date of first receipt of application June 6, 2012.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2684-2 to William Anderson, PO Box 205, Kennebec SD 57544 authorizing the reconstruction of the dam the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 2684-2 authorizes impoundment of 93 acre-feet of water from runoff by reconstructing a dam located in the SE 1/4 SE 1/4 Section 3 with water impounded in the SE 1/4, SW 1/4 NE 1/4 Section 3; all in T106N-R75W.
2. The water appropriated shall be used for the purpose of fish and wildlife propagation and livestock water and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date of approval of Permit No. 2684-2 is July 16, 2012.
5. The date from which applicant may claim right is June 6, 2012.
6. One-fifth of the construction is to be completed on or before January 16, 2015.
7. All construction is to be completed on or before July 16, 2017.
8. Water is to be put to beneficial use on or before July 16, 2021.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. Water Permit No. 2684-2 authorizes an impoundment with a storage capacity of 93 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

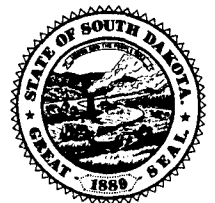
WATER MANAGEMENT BOARD

By: Garland Erbele

Garland Erbele, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

AUG 09 2012

date



Supplemental Information

(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter _____ Depth _____
- b) Casing Type _____ Diameter _____ Thickness _____
- c) Screen Type _____ Diameter _____ Thickness _____
- d) Gravel Pack _____ Length of Gravel Pack _____
- e) Depth to Top of Water Bearing Material _____
- f) Depth to Water (ground surface to water level) _____
- g) Distance to nearest existing domestic well:
- On applicant's property _____ On property owned by others _____

2. Wastewater Disposal System Information

- a) Type of System (i.e. septic tank, drain field)
- b) System Capacity (gallons) _____ Year Constructed _____
- c) Connected to the City of _____ Sanitary System

3. Dugout Information

- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

4. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below for each dam. The locations of the dams need to be shown on the map submitted with the application.

- a) If a private engineering firm or government agency was involved in the design of this dam, please give their name and address:

Konechne Engineering
104 Capitol Hill Drive
Pierre, SD 57501
(605) 224-7092

b) Freeboard 5.7'

c) Crest Width 12.0'

Crest Length 608'

d) Height 21.0

e) Primary Outlet Capacity 231 cfs

If pipe, diameter 48" CMP

f) Secondary Spillway Capacity 1364 cfs

Spillway Width 100'

g) X & Y Slope (e.g. 3 to 1 is a typical slope)

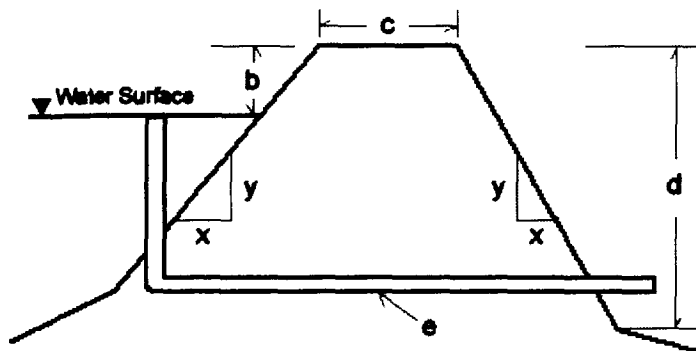
Upstream 3:1

Downstream 3:1

h) Surface Area of Impoundment 18.1

i) Storage 93.0 Acre Feet

j) Drainage Area Above Dam 1,992.0 Acres



Anderson Pond Repair

- 1,992 ac. watershed
- Watershed Length 25,159 ft.
- Watershed Slope 2.95%

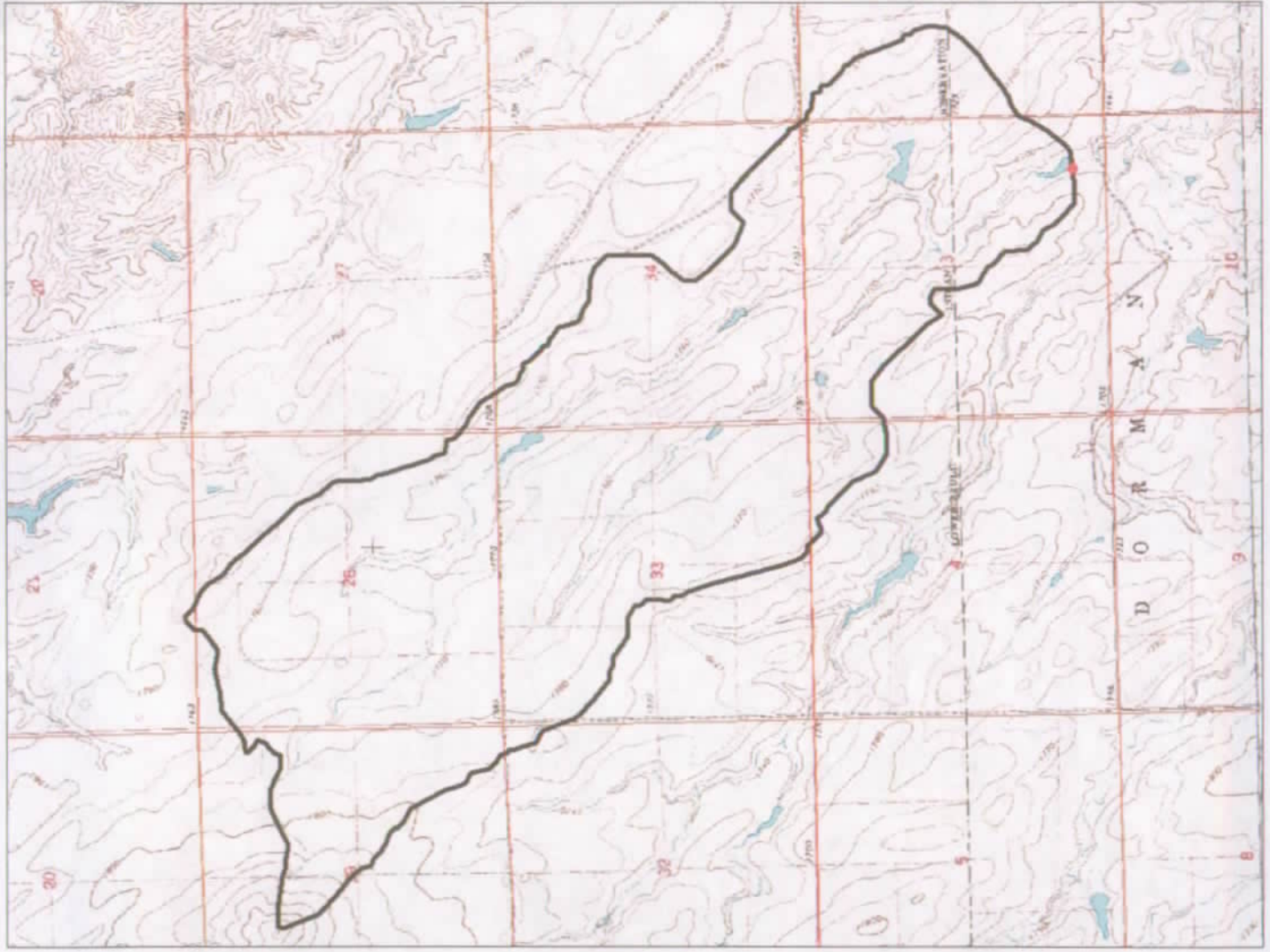
CN 84

2yr - 2.3

5yr - 3.1

10yr - 3.5

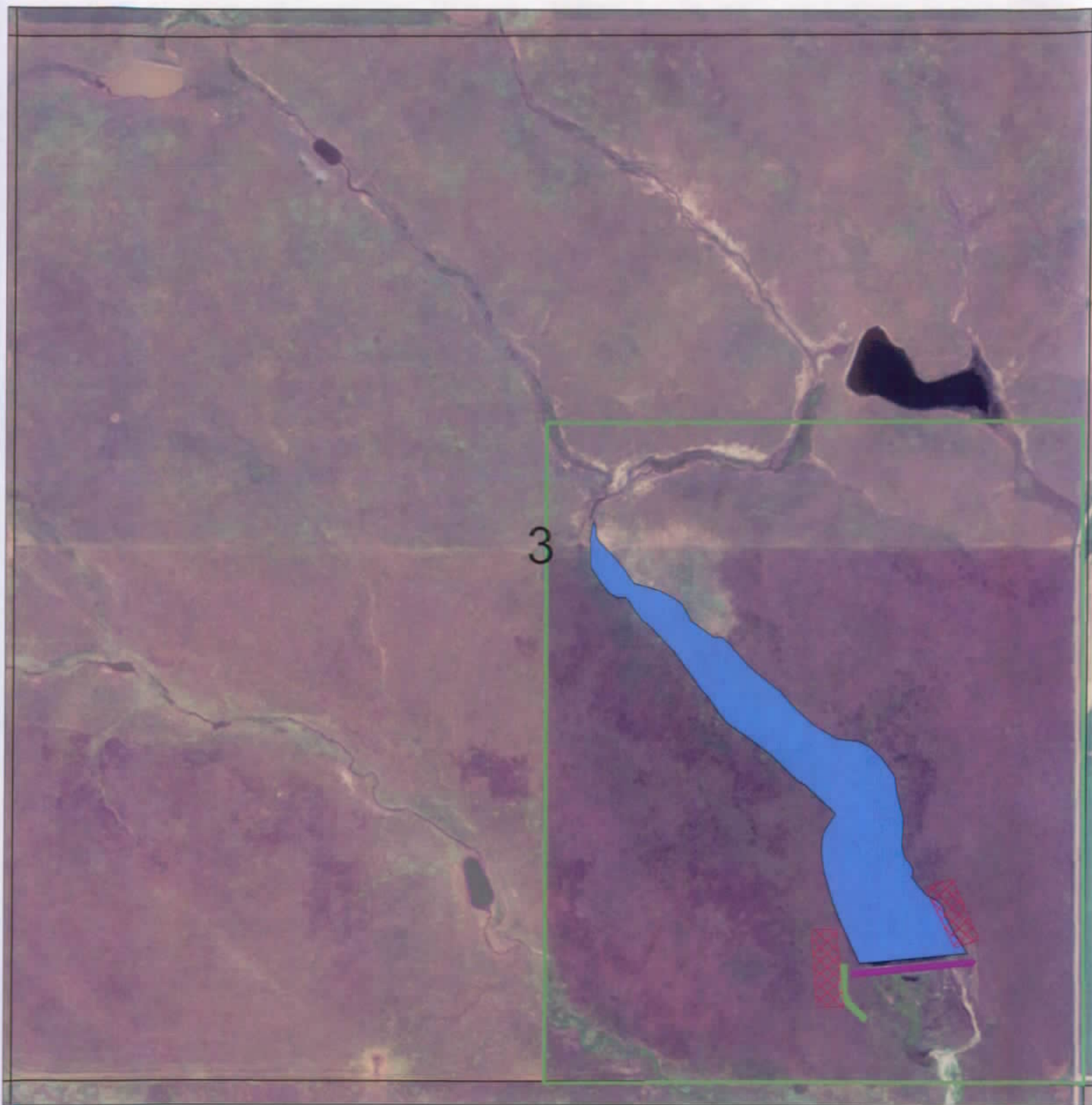
25yr - 4.2



106N-75W-3 SE1/4

WEA: SD-PI-12-015
County: Lyman

Name: William Anderson T106N R75W Sec. 3 SE1/4
Larry Christensen T106N R75W Sec. 3 S1/2S1/2NE1/4



Legend-Wetland Creation

-  Project Boundary
-  Wetland Created
-  Embankment
-  Spillway
-  Borrow Site

8 inches = 1 mile



Dept of Environment & Natural Resources
Water Rights Program
523 E Capitol Ave
Pierre SD 57501

* INVOICE *

June 12, 2012
Invoice No. 61212DDR

USFWS
Sandra Hubbard
Brookings SD 57006

Application for a dam for William Anderson Lyman County -- Kennebec

Application fee \$500.00
Inspection fee \$200.00

PLEASE PAY THIS AMOUNT: \$700.00

BANKCARD SALES SLIP 2 PT. 59082

DO NOT WRITE

ABOVE THIS LINE

SIGN HERE

X

SANDRA J. HUBBARD
USFWS
XXXX XXXX XXXX 1309

EXPIRATION
☒ DATE
CHECKED
10/14

PLEASE DO NOT WRITE ABOVE THIS LINE

1	INV. 61212DDR		700.00
	WM. ANDERSON LYMAN CO		
	KENNEBEC		
DATE	AUTHORIZATION	SUB	
06/13/2012	024932	TOTAL	700.00
REFERENCE NO.	001	TAX	
ID-FOLIO/CHECK NO./LIC. NO. STATE	REG./DEPT.	CLERK	TIP
			MISC.
TOTAL			700.00

SALES SLIP ORIGINAL

The issuer of the card identified on this item is authorized to pay the amount shown as TOTAL upon proper presentation. I promise to pay such TOTAL (together with any other charges due thereon) subject to and in accordance with the agreement governing the use of such card.

Document prepared by:
Jesse J. Lisburg, Wildlife Biologist
US Fish & Wildlife Service
420 S. Garfield Ave.
Pierre, SD 57501
(605) 224-8693 x237

AGREEMENT AND GRANT OF EASEMENTS

This AGREEMENT AND GRANT OF EASEMENTS is made by and between Larry J. Christensen of PO Box 22, Kennebec, SD 57544, hereafter referred to as GRANTOR, and William H. Anderson of PO Box 205, Kennebec, SD 57544, hereafter referred to as GRANTEE.

Consideration for this agreement is \$1 and other valuable consideration, receipt of which is acknowledged by GRANTOR. In consideration thereof the parties agree as follows:

GRANTOR is the owner in fee of real property situated in Lyman County, South Dakota and described as: SW¼NE¼ Section 3, T106N, R75W, which property is hereafter referred to as PROPERTY.

Due to an approved dam renovation project by the GRANTEE, in cooperation with the U.S. Fish & Wildlife Service on and to a structure located on GRANTEE's property downstream described as: SE¼SE¼ Section 3, T106N, R75W and having need for additional easement to facilitate said project, GRANTOR grants and conveys to the GRANTEE additional rights and easement on GRANTOR's PROPERTY as provided herein.

GRANTOR grants and conveys to GRANTEE the right to temporarily flood certain portions of GRANTOR's PROPERTY as described above in perpetuity. Temporary flooding of PROPERTY during rare and extreme runoff events will extend to the same elevation as the top of the reconstructed dam structure located on GRANTEE's property. The normal dam pool will impound 0.2 acres of water on GRANTOR's PROPERTY.

GRANTOR, for the consideration stated herein, for himself and for his heirs, successors, and assigns, expressly waives and releases GRANTEE and representatives from any and all claims they may have for damages which may have occurred or which in the future may occur by reason of construction or maintenance of any of the facilities and structures contemplated by the renovation project and as permitted by this agreement by reason of flooding, overflow, or the depositing of material resulting from said flooding or overflow.

The covenants, agreements, and obligations herein contained shall extend to, bind and inure to the benefit of the parties hereto and their respective personal representatives, heirs, successors and assigns.

IN WITNESS WHEREOF, the GRANTOR and the GRANTEE have executed this Agreement as of the day affixed to this Agreement.

GRANTOR

Larry J. Christensen executed this 1st day of June, 2012.
Larry J. Christensen

GRANTEE

William H. Anderson executed this 1st day of June, 2012.
William H. Anderson

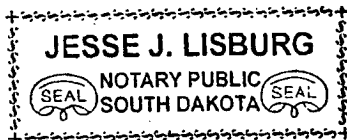
STATE OF SOUTH DAKOTA

COUNTY OF Lyman)SS
)

On this the 1st day of June, 2012, before me, the undersigned officer, personally appeared Larry J. Christensen, known to me or satisfactorily proven to be the person whose name is subscribed to the within instrument and acknowledged that he executed the same for the purposes therein contained.

In WITNESS WHEREOF, I hereunto set my hand and official seal.

(NOTARY SEAL)



Jesse J. Lisburg
Notary Public, South Dakota
Commission expires: 08/23/2016

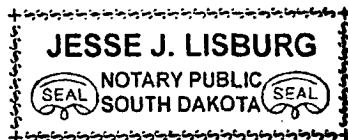
STATE OF SOUTH DAKOTA

COUNTY OF Lyman)SS
)

On this the 1st day of June, 2012, before me, the undersigned officer, personally appeared William H. Anderson, known to me or satisfactorily proven to be the person whose name is subscribed to the within instrument and acknowledged that he executed the same for the purposes therein contained.

In WITNESS WHEREOF, I hereunto set my hand and official seal.

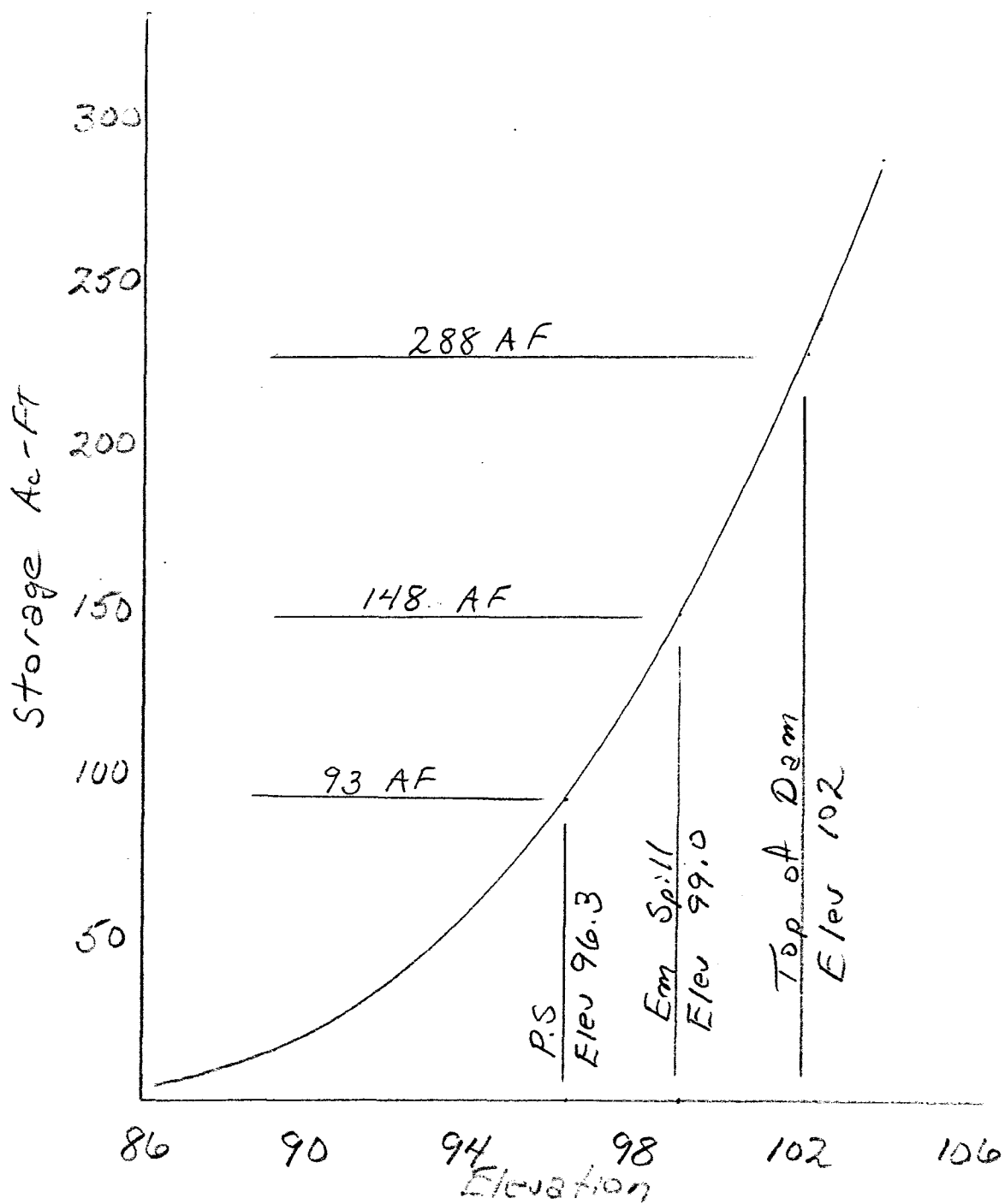
(NOTARY SEAL)



Jesse J. Lisburg
Notary Public, South Dakota
Commission expires: 08/23/2016

COMPUTATION SHEET

BY	DATE	PROJECT	SHEET ____ OF ____
CHKD BY	DATE	FEATURE <i>Mike Anderson</i>	
DETAILS <i>SE Sec 3, T 106N, R 75W - Lyman Co.</i>			



1*****
SITES XEQ 03/14/2012 WATER RESOURCE SITE ANALYSIS COMPUTER PROGRAM
VER 2005.1.05 (USER MANUAL - DATED DECEMBER 2005)
TIME 09:29:50

***** 80-80 LIST OF INPUT DATA *****

SITES 01/01/2005 Mike Anderson Sec3, T106N, R753.1125 H5
SAVMOV 0 101
SAVMOV 101 1 1
STRUCTURE

86 0
93 12.3
96 17.5
98 21.4
101 27
104 32.6

ENDTABLE
WSDATA 5A1 AC 84 1992 25159 2.95
PDIRECT 2.3 4.20
POOLDATA ELEV 96.3 96.3 81 81 SC
PSINLET 1 15.7
PSDATA 1 100 48 .025 82
ASDATA 41 80 50 2 .05 2
ASINSURF 41 .035
ASINLET 41 0.0 0.0 100 0.0 3
180

ENDTABLE
ASEXSURF 41 .035
.65 0
3
2 0
.02

ENDTABLE
ASEXIT 41 N 80
BTMWIDTH FEET 100
GRAPHICS I
GO,DESIGN HL TYPE2 24 TYPE2378 24
SAVMOV 2 101 1
ENDJOB

***** MESSAGE - ALTERNATE STRUCTURE ID (S 1) BEING USED
SINCE USER DID NOT INPUT AN ID.

***** MESSAGE - ALTERNATE SUBWATERSHED ID (A) BEING USED SINCE
USER DID NOT INPUT AN ID.

***** MESSAGE - DRAINAGE AREA FROM WSDATA CONTROL BEING CONVERTED FROM
ACRES TO SQUARE MILES FOR COMPUTATION PURPOSES.

1SITES -----
XEQ 03/14/2012 Mike Anderson Sec3, T106N, R75 WSID=
VER 2005.1.05 SUBW= A
TIME 09:29:50 SITE = S 1 PASS= 1 PART= 1

***** BASIC DATA *****
 CLIMATE AREA - NOT DEFINED DESIGN CLASS A1 = LT 3000.

STORM DISTRIBUTION-PSH 24 HOUR TYPE II RAINFALL DISTRIBUTION

STORM DISTRIBUTION AUX. -24 HOUR TYPE II RAINFALL DISTRIBUTION

PRECIP. - P-PS,1-DAY	P-PS,10-DAY	P-SD	P-FB	
2.30	0.00	0.00	4.20	
WSDATA - CN	DA-SM	TC/L	-/H	QRF
84.00	3.11	25159.00	2.95	0.00
SITEDATA- PERM POOL	CREST PS	FP SED	VALLEY FL	378?
96.30	96.30	0.00	81.00	YES
BASEFLOW	INITIAL EL	EXTRA VOL	SITE TYPE	
0.00	0.00	0.00	DESIGN	
PSDATA - NO. COND	COND L	DIA/W	-/H	
1.00	100.00	48.00	0.00	
PS N	KE	WEIR L	TW EL	
0.025	1.00	15.70	82.00	
2ND STG	ORF H	ORF L	START AUX.	
0.00	0.00	0.00	0.00	
ASCRESTS - AUX.1	AUX.2	AUX.3	AUX.4	AUX.5
0.00	0.00	0.00	0.00	0.00
AUX.DATA - REF.NO.	RETARD. Ci	TIE STATION	INLET LENGTH	
41	0.00	80.00	50	
AUX.DATA - INLET N	SIDE SLOPE	EXIT N	EXIT SLOPE	ACTUAL AUX?
0.035	2.00	0.035	0.050	NO
BTM WIDTH - BW1	BW2	BW3	BW4	BW5
ft 100.00	0.00	0.00	0.00	0.00

AUXILIARY SPILLWAY RATING DEVELOPED USING WSPVRT.

1SITES -----
 XEQ 03/14/2012 Mike Anderson Sec3, T106N, R75 WSID=
 VER 2005.1.05 SUBW= A
 TIME 09:29:50 SITE = S 1 PASS= 1 PART= 2

MESSAGE ---- Climatic Index changed from 0.0 to 1.0 for this run.

PERM POOL	96.30 FT	93.1 ACFT	18.09 AC	0.0 CFS
CREST PS	96.30 FT	93.1 ACFT	18.09 AC	0.0 CFS
SED ACCUM	96.30 FT	93.1 ACFT	18.09 AC	0.0 CFS
START ELEV	96.30 FT	93.1 ACFT	18.09 AC	0.0 CFS

NRCS-PSH D= 24.00 HR P= 2.30 IN Q= 0.96 IN DA= 3.11 SM
TC= 3.57 HR CN= 84.00 VOL= 160.0 ACFT

PEAK = 389.6 CFS, AT 14.3 HRS.

ROUTED RESULT - HYD TYPE EMAX VOL-MAX AMAX QMAX
NRCS-PSH 99.01 FT 149.1 ACFT 23.28 AC 212.6 CFS

PS STORAGE 56.0 ACFT, BETWEEN AUX. CREST AND SED. ACCUM ELEVATIONS.

DRAWDOWN (DDT) TEST 96.30 FT 93.1 ACFT 0.00 CFS
CONTROL IS 0.000 DETENTION STORAGE

DRAWDOWN TIME = 1.80 DAYS, TO 0.0 CFS (LIMIT = 10.00 DAYS)

RATING TABLE DEVELOPED, SITE = S 1:
BY PROGRAM FOR PS AND AUX. SPILLWAYS
AUX. RATING USED WSPVRT METHOD.

RATING TABLE NUMBER 1

	ELEV. FEET	Q-TOTAL CFS	Q-PS CFS	Q-AUX. CFS	VOLUME AC-FT	AREA ACRE
1	96.30	0.00	0.00	0.00	93.09	18.09
2	96.97	26.54	26.54	0.00	105.59	19.39
3	97.64	75.07	75.07	0.00	118.97	20.69
4	98.30	137.92	137.92	0.00	133.21	21.96
					FULL CONDUIT FLOW, ELEV = 98.97 FT	
5	98.97	212.34	212.34	0.00	148.29	23.21
6	99.60	216.30	216.30	0.00	163.25	24.38
7	100.23	220.13	220.13	0.00	178.95	25.56
8	100.86	223.89	223.89	0.00	195.39	26.73
9	101.48	227.60	227.60	0.00	212.56	27.91
10	102.11	231.24	231.24	0.00	230.48	29.08
11	102.74	234.82	234.82	0.00	249.13	30.25
12	103.37	238.36	238.36	0.00	268.52	31.43
13	104.00	241.84	241.84	0.00	288.65	32.60

***** MESSAGE - CREST OF AUXILIARY SPILLWAY RAISED 0.05 FT ABOVE THE FULL PIPE
FLOW ELEVATION IN THE NEXT RATING TO AVOID HAVING INTERPOLATION
PROBLEMS. NEW CREST ELEVATION = 99.02.

1SITES

XEQ 03/14/2012 Mike Anderson Sec3, T106N, R75 WSID=
VER 2005.1.05 SUBW= A
TIME 09:29:50 SITE = S 1 PASS= 1 PART= 3

AUX. CREST 99.02 FT 149.4 ACFT 23.30 AC 212.6 CFS

PS STORAGE 56.4 ACFT, BETWEEN AUX. CREST AND SED. ACCUM ELEVATIONS.

START ELEV 96.30 FT 93.1 ACFT 18.09 AC 0.0 CFS

EFFECTIVE HEIGHT(H)= 18.0 FEET, PRODUCT= 2693. (H * STORAGE AT CREST AUX.).

INPUT DESIGN CLASS = A1 = LT 3000. PRODUCT.

NRCS-FBH D= 24.00 HR P= 4.20 IN Q= 2.55 IN DA= 3.11 SM
TC= 3.57 HR CN= 84.00 VOL= 423.1 ACFT

PEAK = 1072.9 CFS, AT 14.3 HRS.

***** WARNING - UPSTREAM END OF CREST -20. IS UPSTREAM OF THE
FIRST GROUND POINT 30. STATION.

RATING TABLE DEVELOPED, SITE = S 1:
BY PROGRAM FOR PS AND AUX. SPILLWAYS
AUX. RATING USED WSPVRT METHOD.

RATING TABLE NUMBER 2

	ELEV. FEET	Q-TOTAL CFS	Q-PS CFS	Q-AUX. CFS	VOLUME AC-FT	AREA ACRE
1	96.30	0.00	0.00	0.00	93.09	18.09
2	96.97	26.54	26.54	0.00	105.59	19.39
3	97.64	75.07	75.07	0.00	118.97	20.69
4	98.30	137.92	137.92	0.00	133.21	21.96
FULL CONDUIT FLOW, ELEV = 98.97 FT						
5	98.97	212.34	212.34	0.00	148.29	23.21
6	98.98	212.44	212.44	0.00	148.43	23.22
7	98.98	212.48	212.48	0.00	148.58	23.23
8	98.99	212.52	212.52	0.00	148.72	23.25
9	99.00	212.56	212.56	0.00	148.87	23.26
10	99.00	212.60	212.60	0.00	149.01	23.27
11	99.01	212.63	212.63	0.00	149.16	23.28
12	99.01	212.67	212.67	0.00	149.30	23.29
13	99.02	212.71	212.71	0.00	149.45	23.30
14	99.27	228.11	214.26	13.85	155.31	23.77
15	99.52	256.23	215.80	40.42	161.29	24.23
16	99.97	367.65	218.55	149.10	172.34	25.07
17	100.51	576.02	221.85	354.16	186.35	26.09
18	101.51	1154.63	227.74	926.89	213.26	27.95
19	102.76	2105.12	234.90	1870.23	249.51	30.28
20	104.00	3299.23	241.84	3057.40	288.65	32.60

SUMMARY OF AUXILIARY SPILLWAY SURFACE CONDITIONS USED IN COMPUTATIONS BY REACH

REACH	FROM STA (ft)	TO STA (ft)	SLOPE (%)	RETARDANCE CURVE INDEX@	VEGETAL COVER FACTOR	MAINT. CODE	ROOTING DEPTH (ft)	REACH LOCATION *
1	-20.	80.	0.0	0.035	**	**	**	CREST
2	80.	160.	5.0	0.035	0.65	3	2.0	EXIT !

@ The program interprets retardance curve index entries of less than 1 as Manning's n values.

* Upper case indicates a reach of constructed spillway channel.

** The program does not use vegetal cover factor, maintenance code, and
 rooting depth for inlet and crest reaches in computations.
 ! Reach 2 used in computing exit channel velocities.

DRAWDOWN USING FREEBOARD STORM FOLLOWS, STARTING AT ELEVATION 99.01 FT.

DRAWDOWN (DDT) TEST 96.30 FT 93.1 ACFT 0.00 CFS
 CONTROL IS 0.000 DETENTION STORAGE

DRAWDOWN TIME = 1.66 DAYS, TO 0.0 CFS (LIMIT = 10.00 DAYS)

ROUTED RESULTS	BTM WIDTH FT	MAX ELEV FT	VOL-MAX ACFT	AREA-MAX AC	AUX.-HP FT	VOL-AUX. ACFT
NRCS-FBH	100.0	101.09	201.6	27.2	2.07	52.2

PEAK - CFS DISCHARGE =	Q-PS	Q-AUX.	Q-TOT.
	225.3	679.1	904.4

	CRITICAL DEPTH FT	CRITICAL VELOCITY FT/SEC	CRITICAL SLOPE-Sc FT/FT	25% OF Q Sc FT/FT
AUXILIARY SPILLWAY ---	1.12	5.94	0.017	0.024

EROSIONALLY EFFECTIVE STRESS FOR STABILITY ANALYSIS OF AUX. EXIT CHANNEL
 (Refer to Ag. Handbook 667, Chapt. 3, for allowable stresses.)
 Aux. Spillway Discharge = 679. cfs; Bottom Width = 100. ft

REACH NO.	FROM STA	TO STA	SLOPE %	MANNING'S n	VELOCITY ft/s	TOTAL STRESS lb/ft^2	EFFECTIVE STRESS lb/ft^2
2	80.	160.	5.00	0.035	8.18	2.55	1.550

AUXILIARY SPILLWAY DURATION FLOW =	8.1 HOURS
ATTACK, OE/B =	1.7 ACFT/FT

***** MESSAGE - NHCP378 CRITERIA USED BUT AUXILIARY SPILLWAY RATING NOT
 BASED ON ASFILE RATINGS.

EXIT CHANNEL FLOW SUPERCRITICAL: MAX VELOCITY=	8.2 FT/SEC
EXIT SLOPE =	0.050 FT/FT
FLOW DEPTH =	0.8 FT

>>>> NHCP378 RUN - MINIMUM DEPTH, DESIGN FLOW TO TOP OF DAM; 1.00 FT REQUIRED
 FOR THIS PASS. NEW TOP OF DAM ELEVATION = 102.09.

ROUTED RESULTS	BTM WIDTH FT	MAX ELEV FT	VOL-MAX ACFT	AREA-MAX AC	AUX.HP FT	VOL-AUX. ACFT
MINIMUM AUX.	100.0	102.09	230.1	29.1	3.08	80.6

PEAK - CFS DISCHARGES =	Q-PS	Q-AUX.	Q-TOT.
	231.2	1364.4	1595.6

CRITICAL	CRITICAL	CRITICAL	25% OF Q
----------	----------	----------	----------

AUXILIARY SPILLWAY ---	DEPTH FT 1.77	VELOCITY FT/SEC 7.43	SLOPE-Sc FT/FT 0.015	Sc FT/FT 0.020
---------------------------	---------------------	----------------------------	----------------------------	----------------------

Inflow Hyd 1 PSH-Peak = 212.56 CFS at 16.13 hrs., Location Point

Inflow Hyd 1 FBH-Peak = 904.35 CFS at 14.94 hrs., Location Point

HYDOUT 1

1SITES.....JOB NO. 1 COMPLETE.

Mike Anderson Sec3, T106N, R75

0 SUBWATERSHED(S) ANALYZED.

1 STRUCTURE(S) ANALYZED.

2 HYDROGRAPHS ROUTED AT LOWEST SITE.

0 TRIALS TO OBTAIN BOTTOM WIDTH FOR SPECIFIED STRESS OR VELOCITY.

SITES.....COMPUTATIONS COMPLETE

>>>	SITE ID	SUBWS ID	SUBWS DA (SQ MI)	CURVE NO.	TC (HRS)	TOTAL DA (SQ MI)	TYPE DESIGN	STRUC CLASS	<<<
	S 1	A	3.11	84.	3.57	3.11	378CR	A1	

PASS NO.	DIA./ WIDTH (IN/FT)	AUX.CREST ELEV (FT)	BTM. WIDTH (FT)	MAX. HP (FT)	MAX. ELEV (FT)	EMB. VOL. (CY)	INTEGR.* DIST. (FT)	EXIT* VEL. (FT/SEC)	TYPE HYD
1	48.0	99.0	100.0	3.1	102.1	0.	0.	8.2	MIN. AUX.

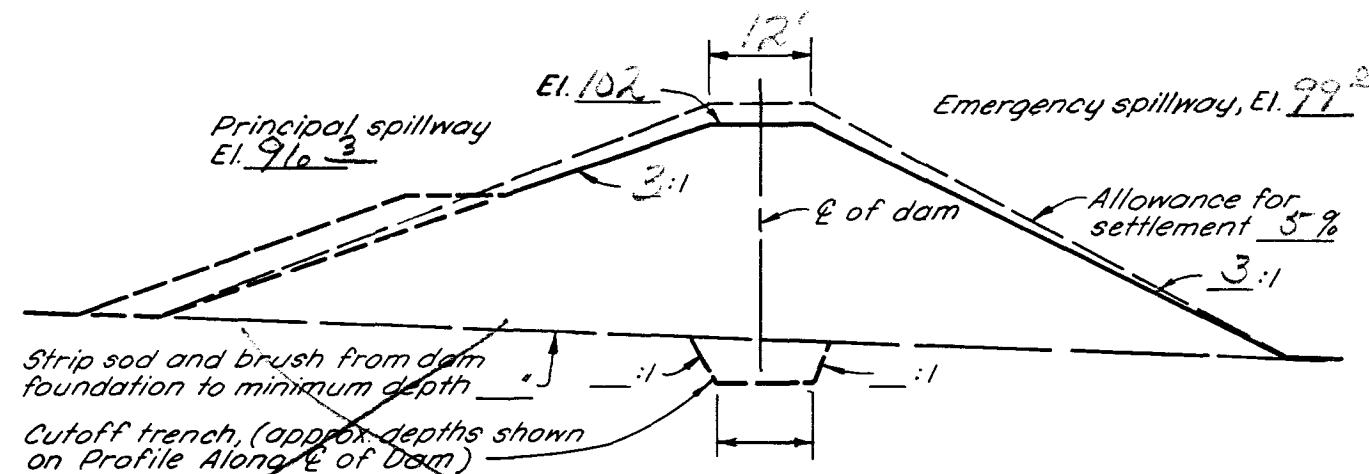
* INTEGRITY DIST. AND EXIT VEL. ARE BASED ON THE ROUTED HYDROGRAPH AND WILL NOT RELATE TO THE MAX. ELEV. (TOP OF DAM), WHICH IS SET BY MINIMUM DESIGN CRITERIA.

SITES.....SUMMARY TABLE 1 COMPLETED.

NRCS SITES VERSION 2005.1.05 ,01/01/2005
FILES

DRAINAGE AREA	ANNUAL YIELD	PEAK RUNOFF	EMERG. SPLWY. CAPACITY	WATER DEPTH	SURFACE AREA	SEDIMENT STORAGE	TOTAL STORAGE
ACRES	50% AC. FT.	25-YR.	C. F. S.	FEET	ACRES	AC. FT.	AC. FT.
1992	78	1073	1364	10	18	—	93

LOCATION

[illegible]

TYPICAL CROSS SECTION OF DAM

S.D. CONSTRUCTION AND MATERIAL SPECIFICATIONS:

SD-2 Cleaning
SD-7s Earth Fill
SD-9 Drain Fill
SD-12B Concrete
SD-15 CMP
SD-16 Timber Fabrication
SD-19 PVC

EARTH DAM

OPERATOR: Mike Anderson

CONSERVATION DISTRICT: _____

Class "A" H222210

Designed	Approved by
Drawn	Title
Traced	Title
Checked	Sheet No. Drawing No.

(Rev. 4-73) 5, N-29, 073.1a(1.

SKETCH PLAN OF DAM AND RESERVOIR AREA

Approximate scale 1" = _____

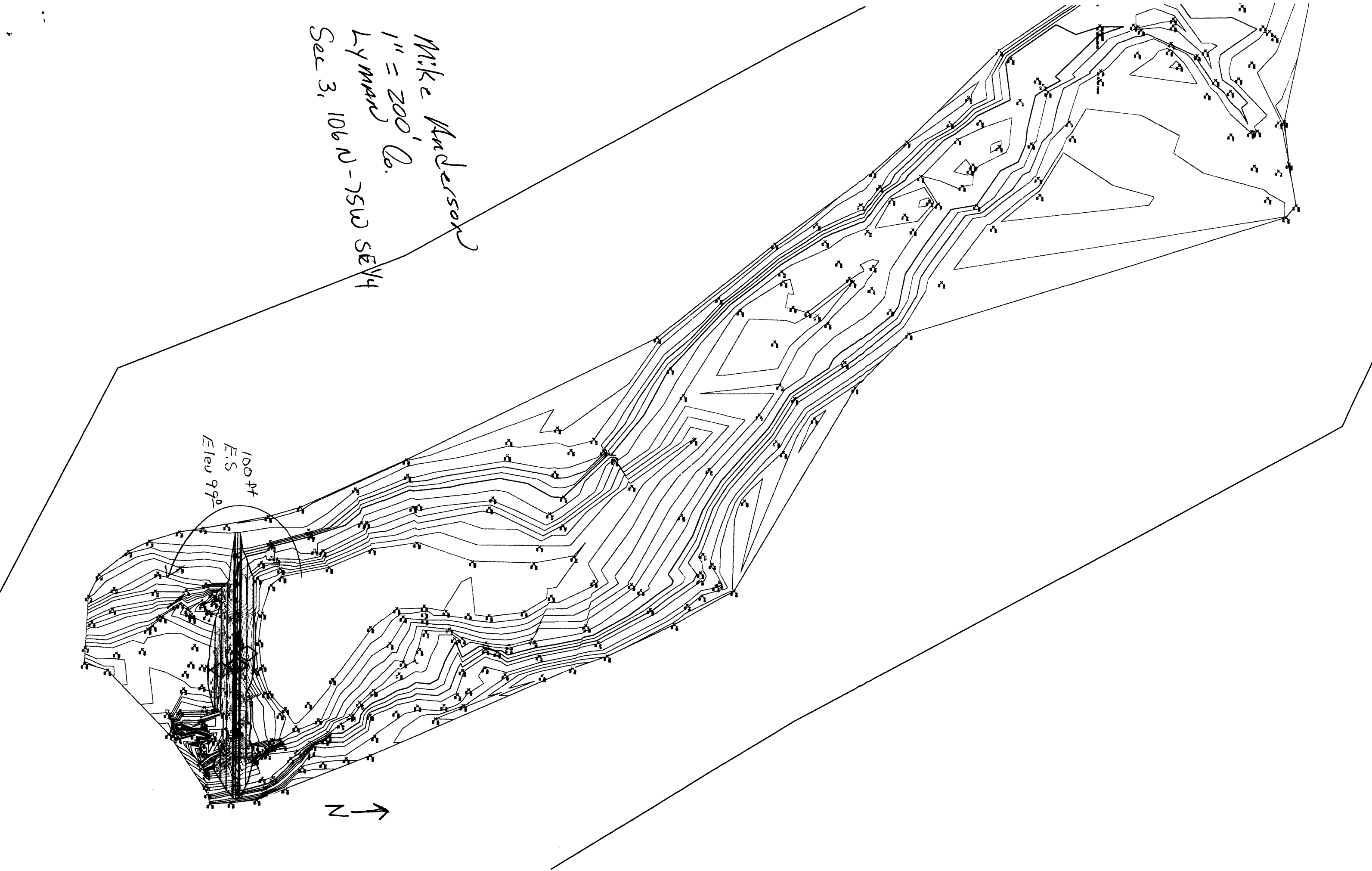
REFERENCE: GUIDE PLAN NO. 1.0

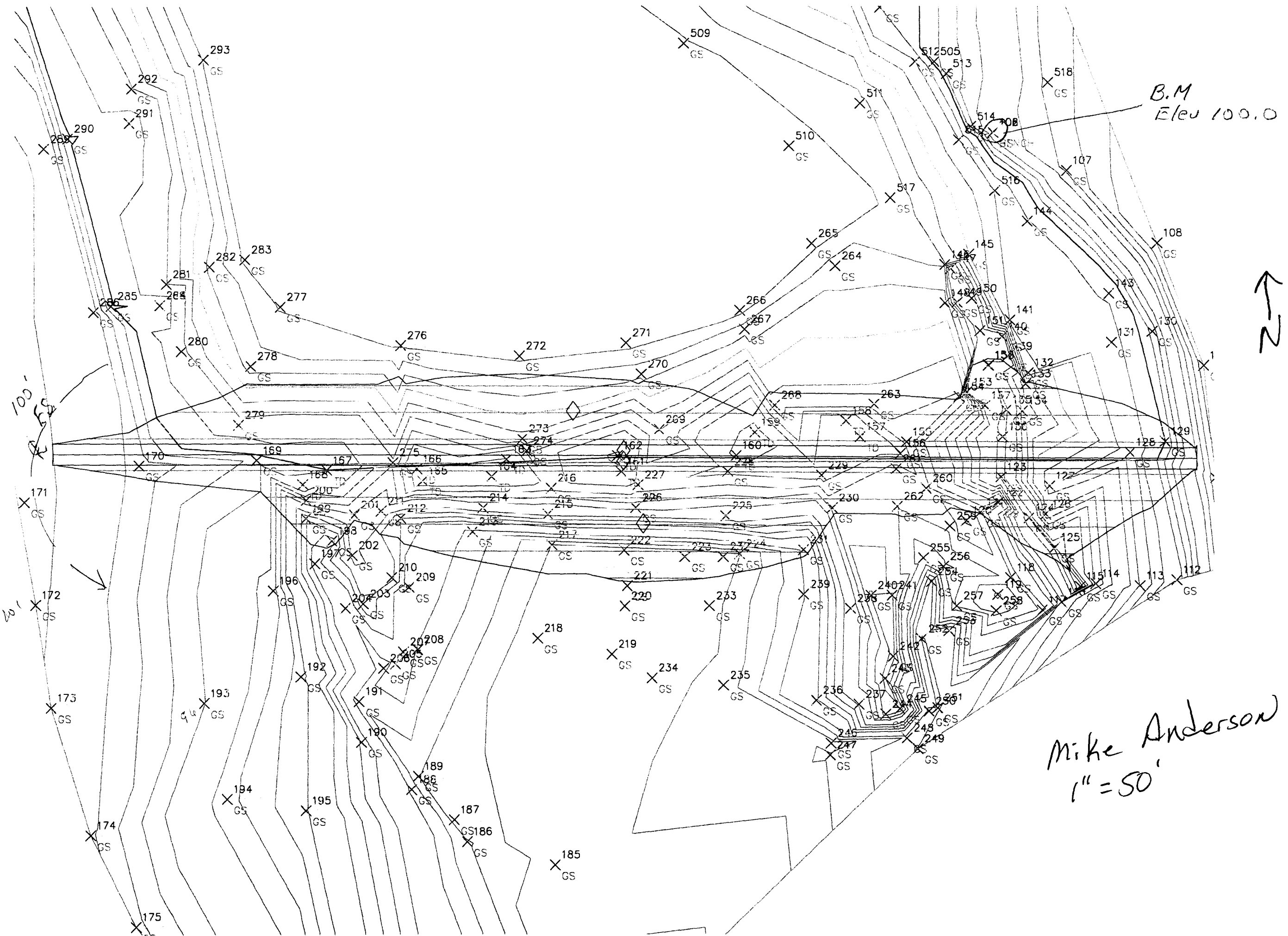
JOB PLAN NO. 1.0

Mike Anderson
1" = 200'
Lyman
Sec 3, 106N-75W SE 1/4

100 ft
E.S.
Elev 990

N





Locate principal spillway pipe as directed at $\mathcal{C}$ of dam sta. _____ at an angle of _____ to the $\mathcal{C}$ of the dam.

Trash rack and baffle plate not shown. See job plan no. 6.4

$\frac{3}{1}$:1 slope normal to $\mathcal{C}$ of dam

Top of dam after settlement El. 102.0

Note: Allowance for settlement 5 %

Emergency spillway El. 99.0

Principal spillway El. 96.3

Berm, if required $\frac{3}{1}$:1 slope normal to $\mathcal{C}$ of dam

El. 87.0

60" dia. riser, see job plan no. 5.3

92°

Antiseep collars and seep collar
J.P. 3.8

100' of 48" dia. pipe

CROSS SECTION OF DAM ALONG $\mathcal{C}$ OF PRINCIPAL SPILLWAY
(Not to scale)

SPECIFICATION NOTES

1. ELBOW, IF REQUIRED, MAY BE FABRICATED BY CONTINUOUS WELDING SEPERATE PIPE SECTIONS OR BY FABRICATING A CONTINUOUS WELDED JOINT ON THE UPSTREAM END OF LAST SECTION OF PIPE.
2. PIPE WALL THICKNESS SHALL BE _____ GAGE OR _____ INCHES.

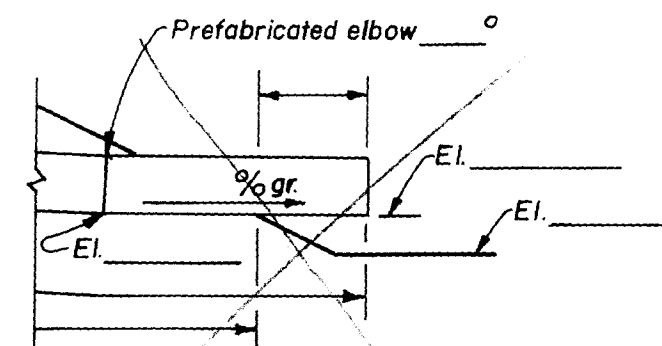
All Pipe to be CMP SPI/121

2nd vinyl coated

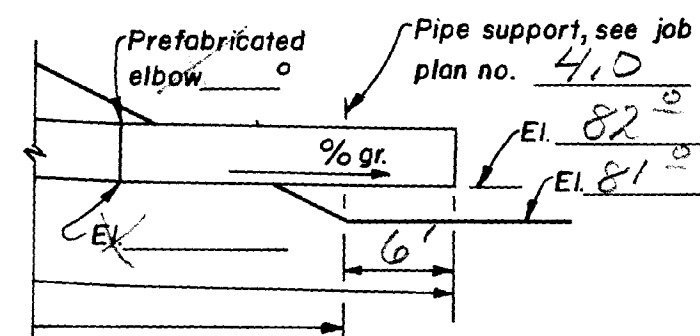
TABLE OF QUANTITIES

ITEM	UNIT	QUANTITY

APPLICABLE STANDARD S.C.S. SPECIFICATIONS



OUTLET DETAIL WITHOUT
PIPE SUPPORT



OUTLET DETAIL WITH
PIPE SUPPORT

Sec. _____, T. _____, R. _____
County _____

LOCATION

CORRUGATED METAL PIPE DROP INLET PRINCIPAL SPILLWAY

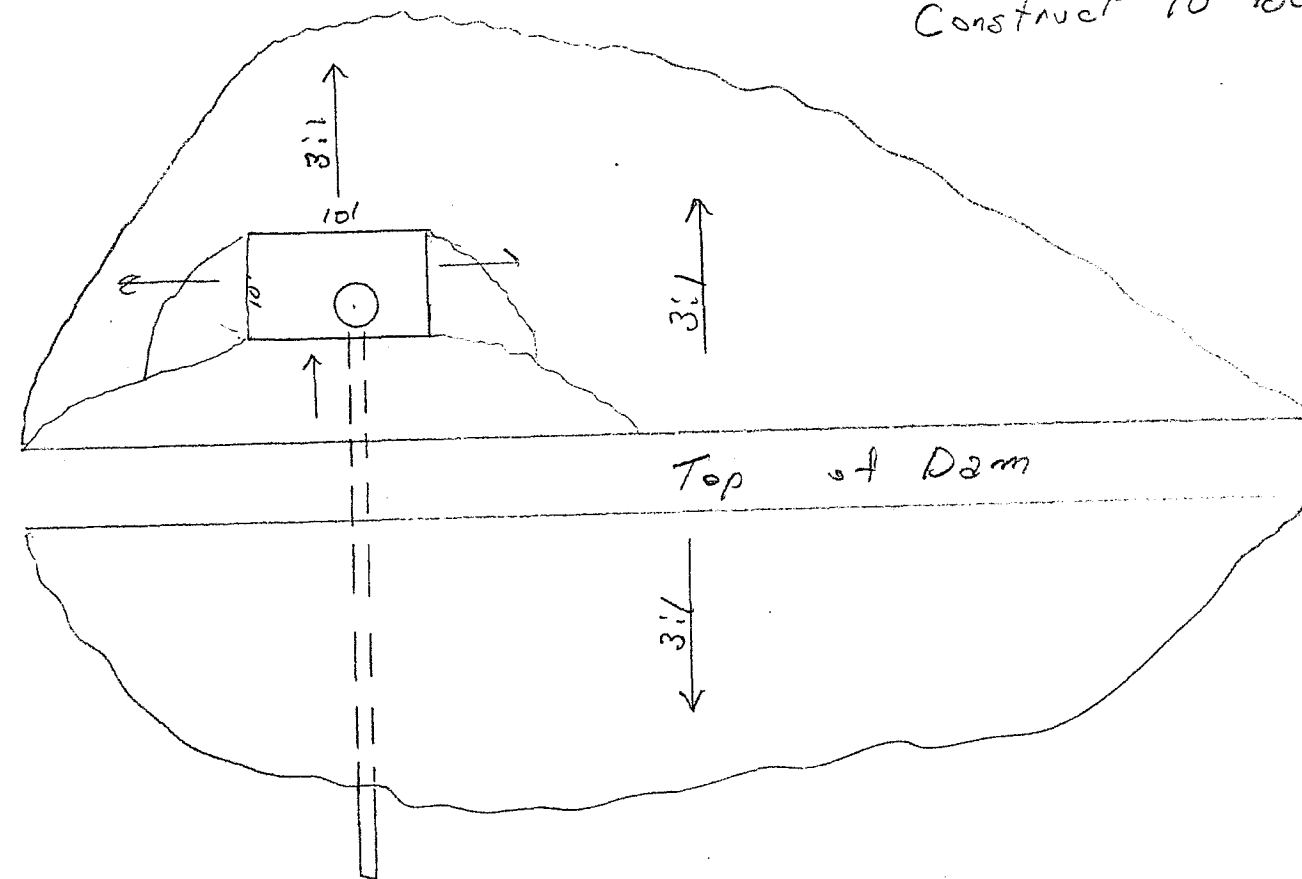
OPERATOR Mike Anderson

CONSERVATION DISTRICT _____

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Date _____	Approved by _____
Designed _____	Title _____
Drawn _____	Title _____
Traced _____	Sheet _____
Checked _____	No. _____
	of _____

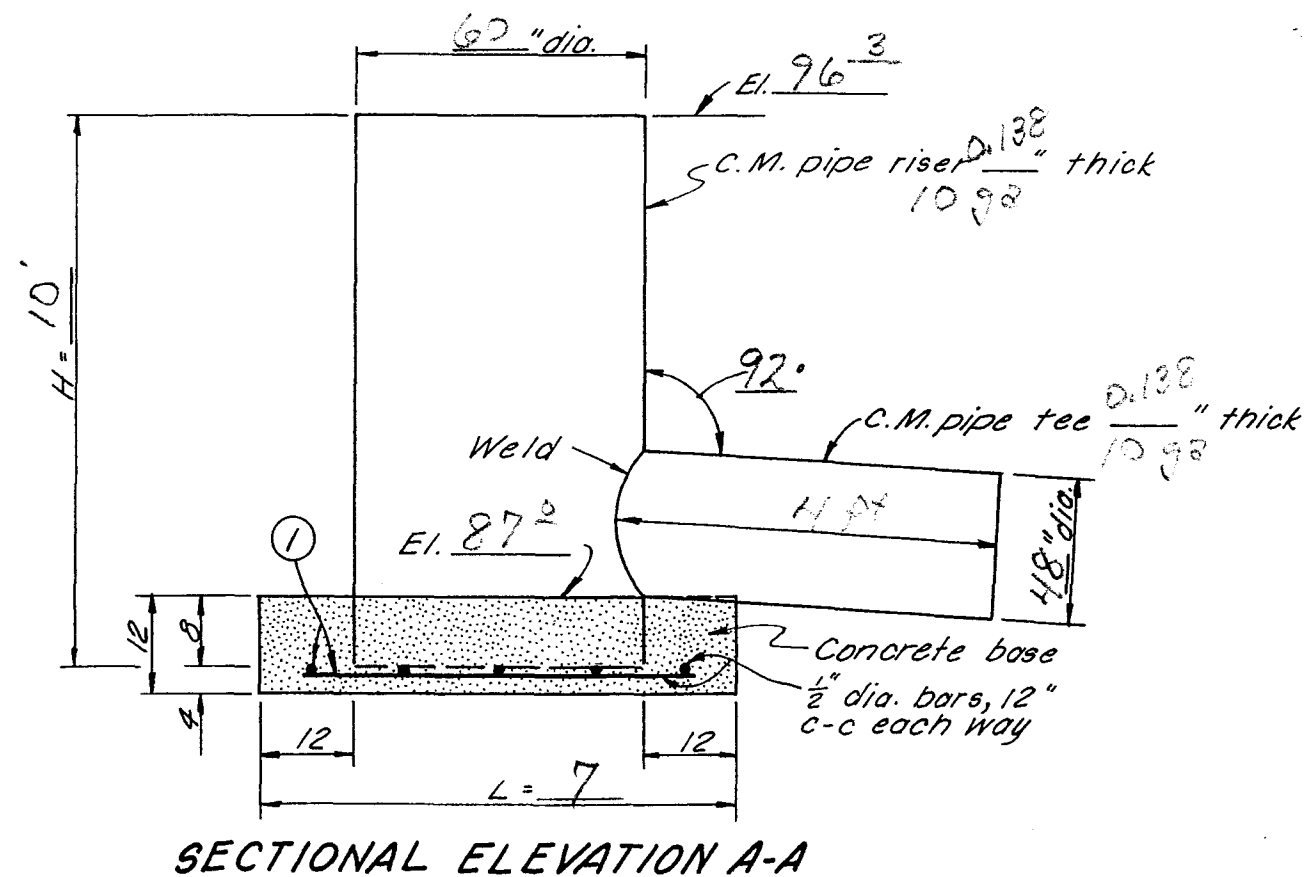
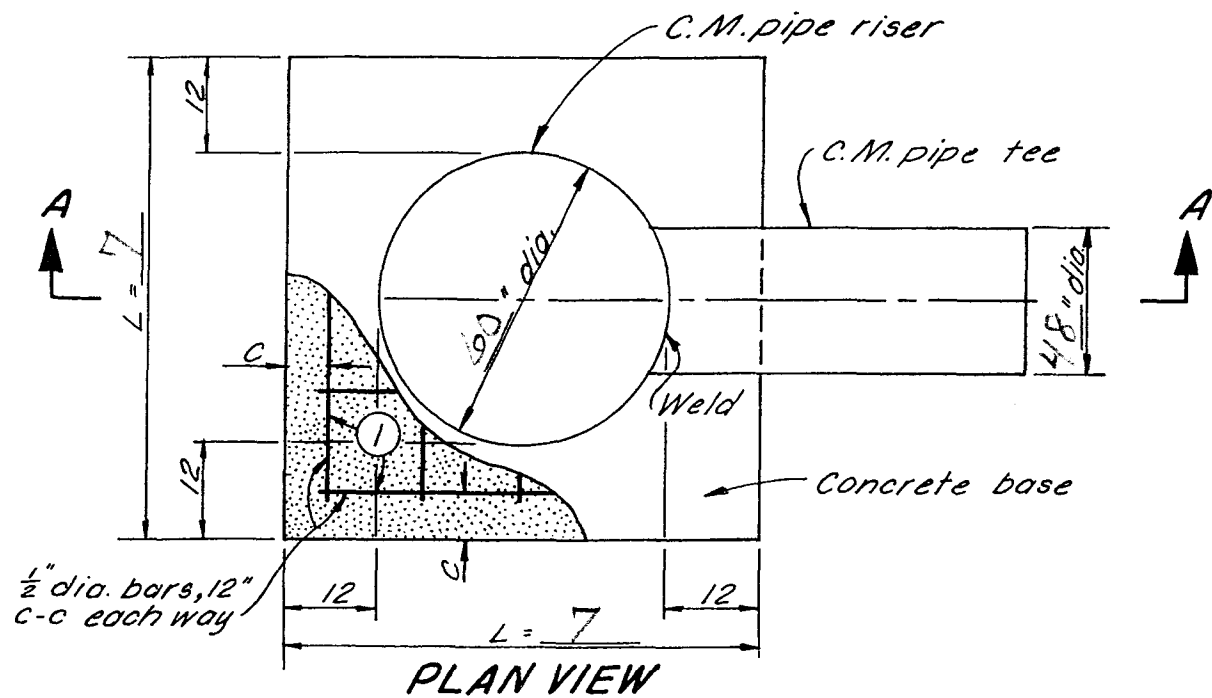
Construct 10' Berm at Riser



PLAN VIEW

Mike Anderson

DK-1



STEEL SCHEDULE

RISER DIA. IN.	BAR SIZE	MARK	TYPE	NO. REQ'D.	LENGTH FT.-IN.	TOTAL LENGTH FT.-IN.	TOTAL WT. LB.	C IN.	L FT.-IN.
60	4	I	STR.	14	6-6	91-0	61	6	7-0

TABLE OF QUANTITIES

ITEM	UNIT	QUANTITY
CONCRETE	CU. YD.	1.9
REINFORCING STEEL	LB.	61

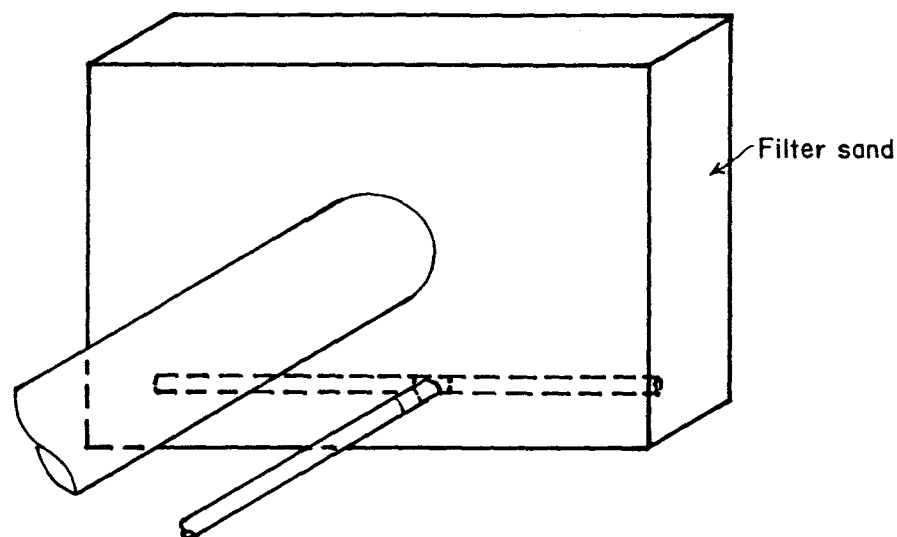
NOTE:

C.M. PIPE RISER WITH FABRICATED TEE

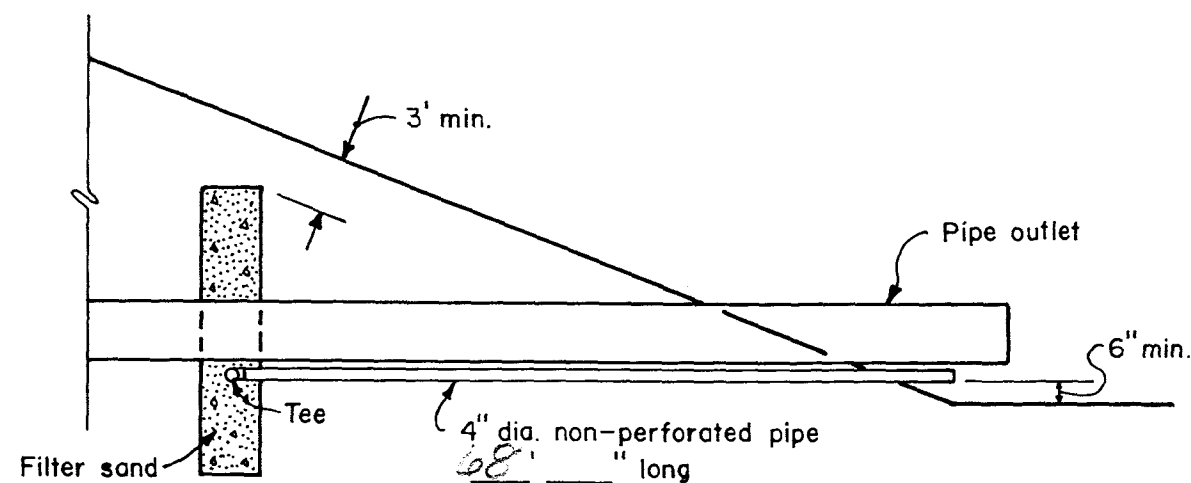
OPERATOR: Mike Anderson

CONSERVATION DISTRICT: _____

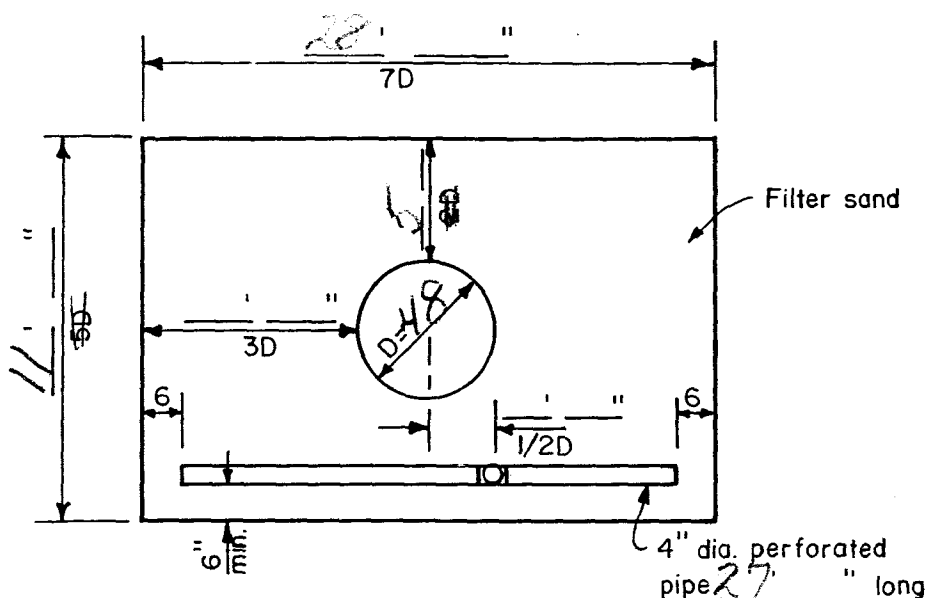
Date _____		Approved by _____	
Designed _____		Title _____	
Drawn _____		Title _____	
Traced _____		Sheet _____	
Checked _____		Drawing No. _____	



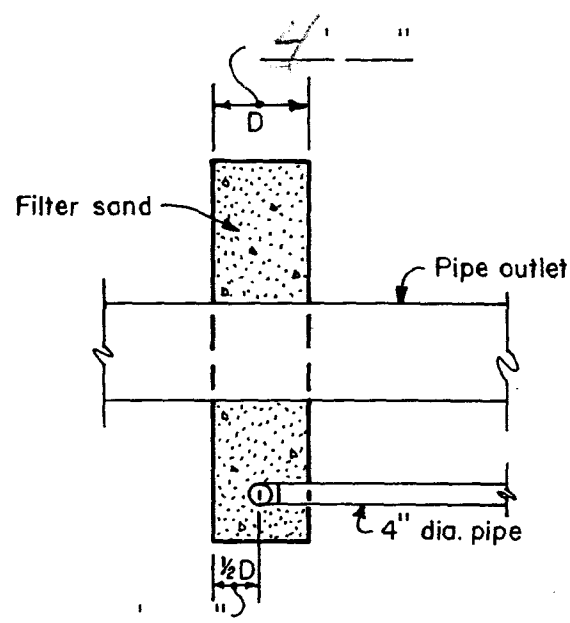
ISOMETRIC VIEW



OUTLET DETAIL



UPSTREAM VIEW



SIDE VIEW

FILTER GRADATION

SIEVE SIZE	PERCENT PASSING
3/8"	100
4	95-100
8	80-100
16	50-85
30	25-60
50	10-30
100	2-10

See spec SD-9
46cy

Sec. _____, T. _____, R. _____

_____ County

LOCATION

SAND ANTISEEP COLLAR

OPERATOR Mike Anderson

CONSERVATION DISTRICT _____

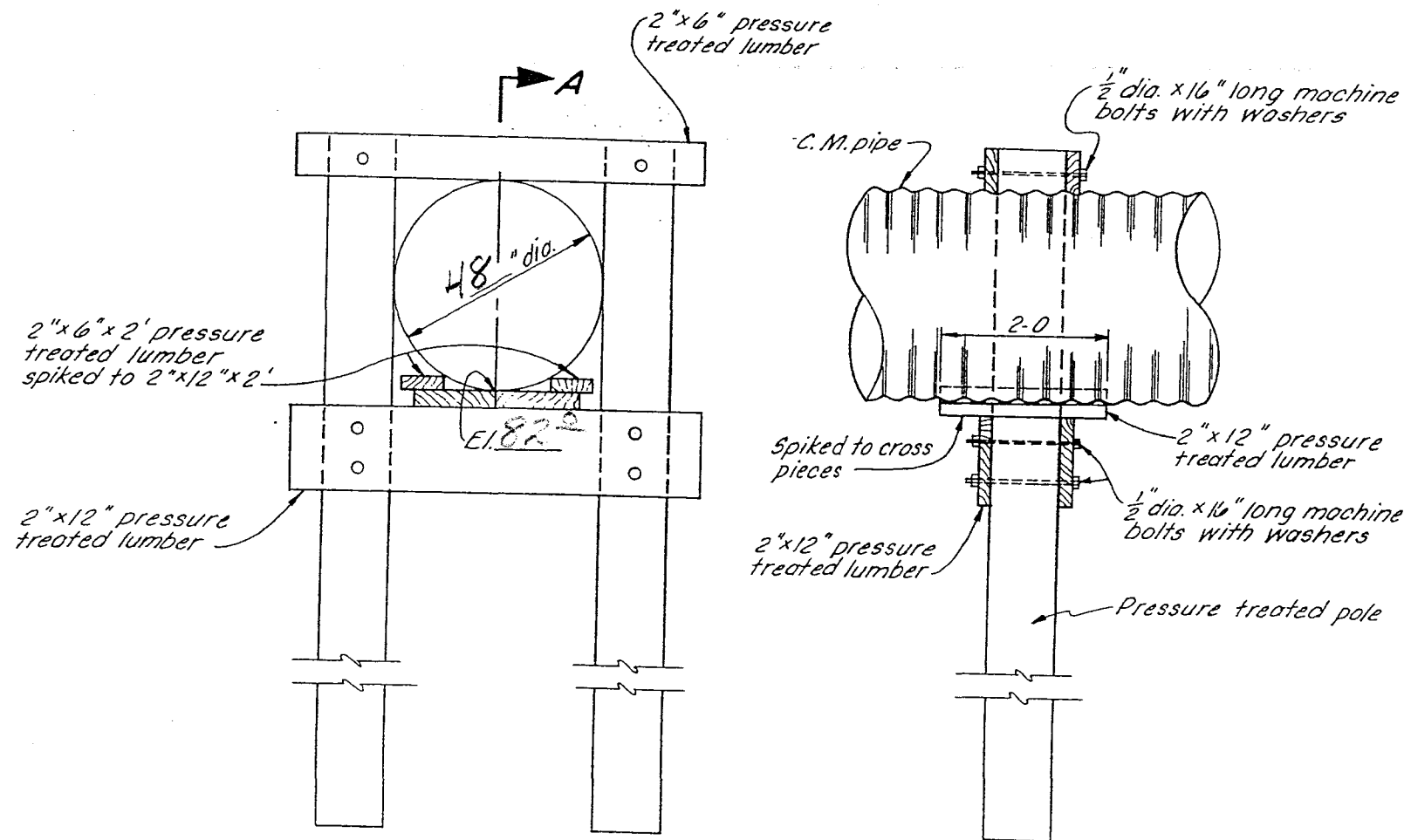
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed _____	Date _____	Approved by _____
Drawn _____		Title _____
Traced _____		Title _____
Checked _____	Sheet _____	Drawing No _____
	No _____	
	of _____	

NOTE:

1. THE 4" DIA. PIPE SHALL BE ASTM D1785, SCHEDULE 40, PVC.
2. PROVIDE AN ANIMAL GUARD ON DRAIN OUTLET PIPE. DRILL 2, 1/2" DIA. HOLES, ON $\varnothing$ 6" FROM END OF PIPE AND PLACE A 3/8" DIA., 5 1/2" LONG GALVANIZED STEEL BOLT THRU THEM AND SECURE WITH A NUT (PLACE BOLT HORIZONTAL).

JOB PLAN NO. 3.8



ELEVATION

SECTIONAL ELEVATION A-A

TABLE OF QUANTITIES

ITEM	LENGTH FOR 48" DIA. C.M. PIPE	UNIT	QUANTITY
PRESSURE TREATED POLE 10" DIA.	12-0	EACH	2
2" X 12" PRESSURE TREATED LUMBER	6-0	EACH	2
2" X 6" PRESSURE TREATED LUMBER	6-0	EACH	2
2" X 12" PRESSURE TREATED LUMBER	2-0	EACH	3
2" X 6" PRESSURE TREATED LUMBER	2-0	EACH	2
1/2" DIA. MACHINE BOLTS WITH NUTS	1-4	EACH	10
1/2" DIA. WASHERS		EACH	20

NOTES:

- HAND OR MACHINE TAMP BACKFILL THOROUGHLY AROUND FOOTINGS AND COLUMNS.

TIMBER PIPE SUPPORT

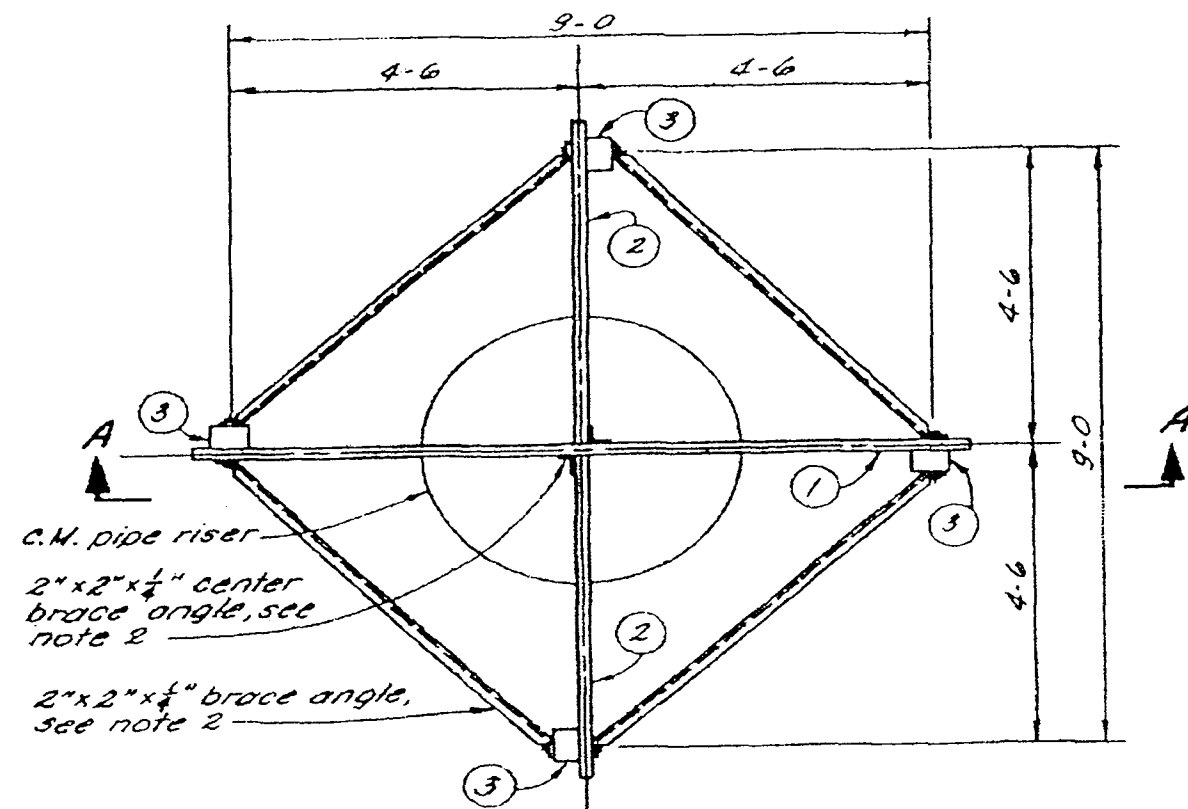
OPERATOR: Mike Anderson

CONSERVATION DISTRICT: _____

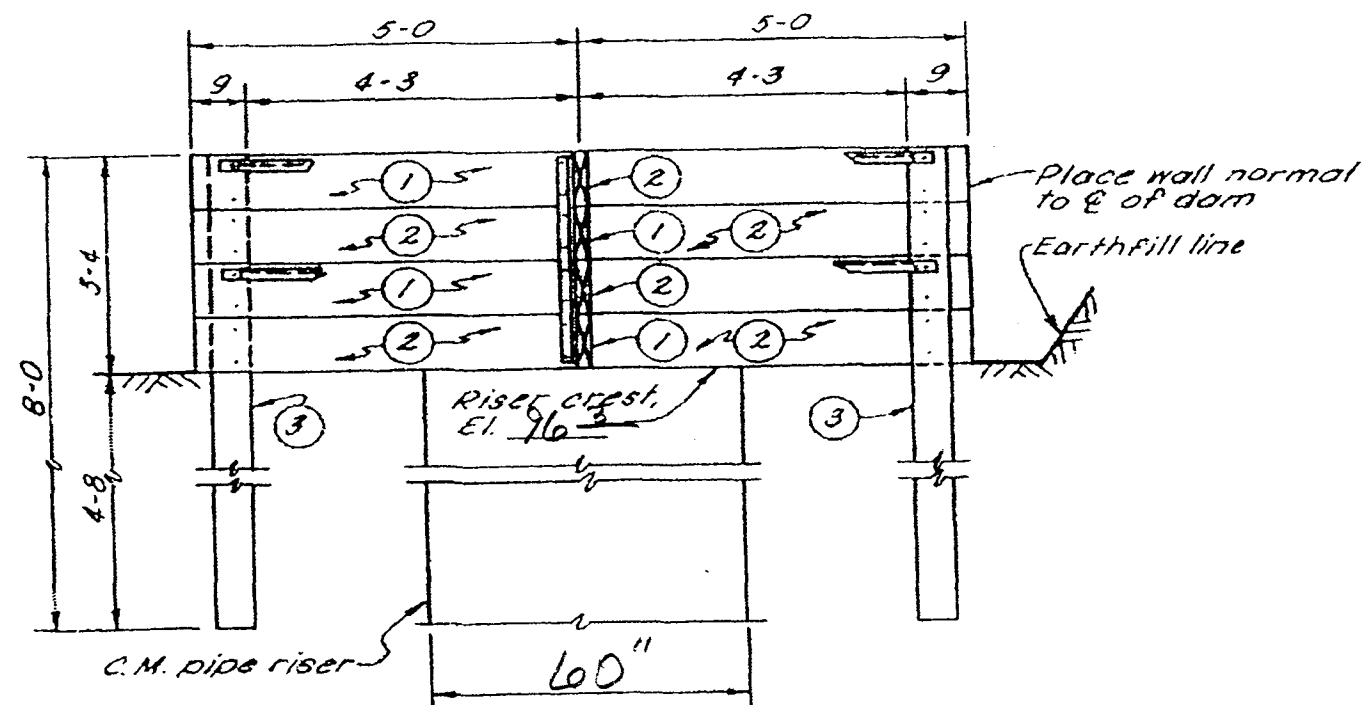
Designed.....	Date.....	Approved by.....
Drawn.....		Title.....
Traced.....		Title.....
Checked.....		Sheet No. of.....
		Drawing No.

REFERENCE: GUIDE PLAN NO. 4.0

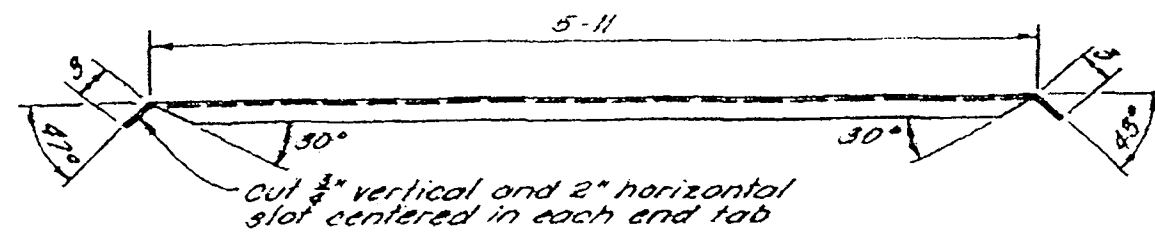
JOB PLAN NO. 4.0



PLAN VIEW



SECTIONAL ELEVATION A-A



PLAN VIEW OF BRACE ANGLE

TABLE OF QUANTITIES

ITEM	MARK	NO. REQ'D.	QUANTITY
2" X 10" X 10' PRESSURE TREATED LUMBER	1	4	67 BD. FT.
2" X 10" X 4'-11" PRESSURE TREATED LUMBER	2	8	66 BD. FT.
4" X 6" X 8' PRESSURE TREATED POST	3	4	64 BD. FT.
2" X 2" X 1/4" X 6'-5" STEEL ANGLE		8	164 LB.
2" X 2" X 1/4" X 3'-2" STEEL ANGLE		2	20 LB.
5/8" X 8" STEEL BOLTS, NUTS, 2 WASHERS		32	32 SETS
1/2" X 3" STEEL BOLTS, NUTS, 2 WASHERS		32	32 SETS

NOTES:

- TO 4" X 6" POSTS (4 REQUIRED) BOLT 2" X 10" BOARDS USING TWO 5/8" X 8" BOLTS PER 2" X 10" BOARD. DO NOT PLACE BOLTS CLOSER THAN 1 1/2" FROM EDGE OF BOARD.
- FOR CENTER BRACE ANGLES DRILL 8 - 9/16" HOLES 5/8" FROM OUTER EDGE OF EACH LEG OF EACH ANGLE AND CENTERED 5 1/4" APART ALONG THE LEG.
- ATTACH BRACE ANGLES TO TOP BOLT ON TOP 2" X 10" BOARD AND TO TOP BOLT ON NEXT TO BOTTOM BOARD.

TRASH RACK AND BAFFLE
FOR RISER DIA. 36" THRU 60"

OPERATOR: Mike Anderson
CONSERVATION DISTRICT: _____

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Date _____		Approved by _____	
Designed _____		Title _____	
Drawn _____		Title _____	
Traced _____		Sheet _____	
Checked _____		Drawing No. _____	

JOB PLAN NO. 6.4

5, N-29, 073.6-40

Water Permit Application No. 2684-2

William Andersson

Top of Dam Elev. - 102
 2nd Spillway Elev. - 99
 P. Spillway Elev. - 96.3
 Dis Emb. Top Elev. - 81

Cat. 3 - Low Hazard Dam

Ht. = 21 ft

Normal Storage Capacity - 93 Ac-Ft
 Int. Storage Capacity - 148
 Max. Storage Capacity - 288

Int. Capacity x Eff. Ht. = $148 \times 18 = 2664 < 3000 \therefore 25 \text{ yr}$
Minimum Spillway Design

From USGS WRI 98-4055 "Tech Ser Est. Peak Flows ... in SD"
 Region C DA = 1992 Ac = 3.1 mi²

$$\begin{aligned} Q_{25} &= 207 \text{ cfs}^{.573} \\ &= 207 (3.1)^{.573} \\ &= 207 (1.9158) \\ &= \underline{400 \text{ cfs}} \end{aligned}$$

$$\begin{aligned} Q_{100} &= 379 \text{ cfs}^{.566} \\ &= 379 (3.1)^{.566} \\ &= 379 (1.9007) \\ &= \underline{720 \text{ cfs}} \end{aligned}$$

Secondary Spillway Capacity

$$\begin{aligned} Q &= CLH^{1.5} \quad C = 2.6 \\ &= 2.6(100)(3)^{1.5} \quad L = 100 \\ &= \underline{1350 \text{ cfs}} \quad H = 3 \end{aligned}$$

NRES Annual Yield

$$DA = 1992 \text{ CN} = 84 \text{ ISO} = 2\frac{1}{2}$$

Section 74:02:08:09

1. Topo Map - OK
2. Dam Axis Profile - OK
3. Dam Max X-sec. - OK
4. Area - Capacity - OK
5. Outlet Details - OK
6. Spillway Rating - OK
7. Spillway Details - OK
8. Specs. - Std. NRES - OK
9. EPP - N/A Cat. 3 - OK

$$\begin{aligned} 80\% \text{ chance} &= 2.6 \\ 2.6 \times 199\frac{1}{2} &= \underline{100 \text{ Ac-Ft}} \end{aligned}$$

$$\begin{aligned} 50\% \text{ chance} &= 1.5 \\ 1.5 \times 199\frac{1}{2} &= \underline{250 \text{ Ac-Ft}} \end{aligned}$$

$$\begin{aligned} 10\% \text{ chance} &= 4.0 \\ 4.0 \times 199\frac{1}{2} &= \underline{665 \text{ Ac-Ft}} \end{aligned}$$



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2684-2, William Anderson**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 2684-2, William Anderson, PO Box 205, Kennebec, SD 57544.

The Chief Engineer is recommending APPROVAL of Application No. 2684-2 because 1) there is reasonable probability there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. Water Permit No. 2684-2 authorizes an impoundment with a storage capacity of 93 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

See report on application for additional information.

Garland Erbele, Chief Engineer
June 20, 2012

REPORT ON
WATER PERMIT APPLICATION No. 2684-2
William Anderson
June 15, 2012

Water Permit Application No. 2684-2 has been filed by William Anderson to impound 93 acre-feet of water from runoff by reconstructing an existing dam located in the SE ¼ SE ¼ of Section 3-T106N-R75W, in Lyman County. The application also requests impoundment of sufficient water to maintain water to the outlet elevation. The water will be used for fish and wildlife production and livestock water purposes.

Discussion:

The dam will be classified as a small size, Category 3, Low Hazard dam. The dam has been designed by Konechne Engineering. The plans and specifications have been reviewed and will be approved; however, reconstruction of the dam can not begin until Water Permit Application No. 2684-2 is approved.

The dam will be 21 feet high with a normal storage capacity of 93 acre-feet with a reservoir level at the primary spillway elevation, and a maximum storage capacity of 288 acre-feet with a reservoir level at the top of dam elevation. A dam of this size and hazard classification is required to have a minimum spillway design capable of passing a 25-year frequency event.

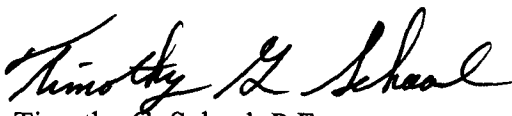
The dam has a drainage area of 1992 acres or 3.11 square miles. The dam is designed to have a 60 inch diameter CMP riser with a 48 inch diameter CMP barrel and 5.7 feet of freeboard at the primary spillway, and a 100 foot wide earthcut secondary spillway with 3 feet of freeboard. A 25 year frequency event produces a peak runoff of approximately 400 cfs and a 100 year frequency event produces a peak runoff of approximately 720 cfs. The earthcut spillway will have a capacity of approximately 1350 cfs.

The annual yield for this drainage area with an 80 percent chance of occurrence, or 8 out of 10 years, is expected to be 100 acre-feet. The annual yield with a 50 percent chance of occurrence, or 1 out of 2 years, is expected to be 250 acre-feet and the annual yield with a 10 percent chance, or 1 out of 10 years, is expected to be 665 acre-feet.

The Anderson Dam will be located in the SE ¼ SE ¼ of Section 3-T106N-R75W on an unnamed tributary to Medicine Creek, about four miles upstream of the confluence of the unnamed tributary and Medicine Creek and about 12 miles upstream of the confluence of Medicine Creek and Lake Sharp on the Missouri River. There are no existing Water Permits/Rights filed on the unnamed tributary or Medicine Creek between the proposed dam and Lake Sharp.

Conclusions:

1. Water Permit Application No. 2684-2 should be approved since unappropriated water is available and approval should not have any adverse effect on existing Water Permits/Rights.
2. If approved, the low flow bypass requirement for domestic use should be a qualification on Water Permit Application No. 2684-2.



Timothy G. Schaal, P.E.

Natural Resources Engineer IV



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

June 26, 2012

William Anderson
PO Box 205
Kennebec, SD 57544

Dear Mr. Anderson:

We have reviewed the plans and specifications for your dam project located in the SE ¼ SE ¼ of Sec. 3-T106N-R75W, in Lyman County. The plans and specifications for the reconstruction of the existing dam are approved. Approval of the plans and specifications does not authorize reconstruction of the dam. The reconstruction of the dam may not begin until Water Permit No. 2684-2 is approved.

Our review was to determine compliance with the requirements of the Water Management Board Safety of Dams Rules, Chapter 74:02:08. Approval of these plans and specifications does not release you, as owner of the dam, from the responsibility for operating and maintaining the dam in good repair to ensure the safety of the dam.

The dam will be classified as a small size Category 3, Low Hazard dam with a dam height of 21 ft. and a normal storage capacity of 93 acre-feet and a maximum storage capacity of 288 acre-feet.

If you have any questions, please feel free to contact us.

Sincerely,

Timothy G. Schaal, P.E.
Natural Resources Engineer IV
for Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

c: Dave Konechne
Jesse Lisburg, USWFS

RECEIVED

JUL 18 2012

Form 8

WATER RIGHTS
PROGRAM

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County of Hughes) SS

I, Marylinn Baker

certify that the attached printed Notice was
taken

from the Capital Journal

printed and published in Pierre

County of Hughes and

state of South Dakota. The notice was
published.

in the newspaper on the following ~~two~~ dates:

July 3, 2012

Cost of Printing

\$30.34

Marylinn Baker
(Signature)

Bookkeeper
(Title)

7-16-12

(Date Signed)

JOURNAL.COM

Public Notice

ing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting the application or recommendation

Public Notice

must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition contesting the Chief Engineer's recommendation.

NOTICE OF APPLICATION

NO. 2684-2 to Appropriate Water
Notice is given that William Anderson, PO Box 205, Kennebec SD 57544 has filed an application for a water permit to impound 63 acre-feet of water SD 57501 (605 from runoff by re-773-3352) and constructing a dam located in the SE 1/4 SE 1/4 Section 3 with water impounded in the SE 1/4, SW 1/4 NE 1/4 Section 3; all in T10N-R15W.

This application requests impoundment of sufficient water to maintain a water to the outlet elevation. The water is for fish and wildlife propagation and livestock water purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends AP-PROVAL of Application No. 2684-3 the petitioner or because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-29, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation.

Steven M. Pimer,
Secretary,
Department of
Environment and
Natural Resources

Published once at the total approximate cost of \$30.34.

Publisher's Affidavit of Publication

RECEIVED

JUL - 9 2012

WATER RIGHTS
PROGRAM

STATE OF SOUTH DAKOTA)
COUNTY OF LYMAN)SS

Connie Penny, of said county and state being duly sworn on her oath says: The Lyman County Herald is a weekly newspaper of general circulation and published in Presho, Lyman County, and State of South Dakota; and has been such newspaper during the times hereinafter mentioned; That said newspaper is a legal weekly, that it has a bonafide circulation of more than 200 copies weekly, that it has been published within said County of Lyman more than fifty-two successive weeks next prior to publication of the notice hereinafter mentioned and maintained at the place of publication; That I, the undersigned am editor of said newspaper, in charge of the advertising department thereof, and have personal knowledge of all the facts stated in this affidavit; that the advertisement headed:

Notice of Application No 2684-2
83 Lines

a printed copy of which is hereto attached and published in the said newspaper for 1 consecutive week(s).

The first publication of said notice in said newspaper aforesaid was on Wednesday, the 4 day of July A.D., 2012 and that the succeeding publications were severally
Wednesday, the _____ day of _____ A.D., 2012
Wednesday, the _____ day of _____ A.D., 2012
Wednesday, the _____ day of _____ A.D., 2012
Wednesday, the _____ day of _____ A.D., 2012
Wednesday, the _____ day of _____ A.D., 2012
Wednesday, the _____ day of _____ A.D., 2012
Wednesday, the _____ day of _____ A.D., 2012

and the last publication on Wednesday, the 4 day of July, 2012, that the full sum of fees charged for publishing the same, to-wit; the sum of \$ 27.47 insures solely to the editor of The Lyman County Herald. That no agreement or understanding for any division thereof had been made with any other person, and that no part thereof has been agreed to be paid to any person whatsoever.

Connie Penny
Michael J. Sprenger



Notary Public

Subscribed and sworn to before me this 5 day of July, 2012

My Commission expires _____, 20____

MICHAEL J. SPRENGER
NOTARY PUBLIC - SOUTH DAKOTA
My Commission Expires
March 27, 2015

NOTICE OF
APPLICATION
NO. 2684-2 to
Appropriate Water

Notice is given that William Anderson, PO Box 205, Kennebec SD 57544 has filed an application for a water permit to impound 93 acre-feet of water from runoff by reconstructing a dam located in the SE 1/4 SE 1/4 Section 3 with water impounded in the SE 1/4, SW 1/4 NE 1/4 Section 3; all in T106N-R75W. This application requests impoundment of sufficient water to maintain water to the outlet elevation. The water is for fish and wildlife propagation and livestock water purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2684-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by July 16, 2012.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.

Published once at the total approximate cost of \$25.15.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

June 26, 2012

Lyman County Herald
PO Box 518
Presho SD 57568

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 2684-2 to Appropriate Water. Please publish the notice once on July 3, 2012. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is William Anderson, PO Box 205, Kennebec SD 57544 (Ph # 605-869-2496).

Please send the Water Rights Program an affidavit or the enclosed Proof of Publication form immediately.

The applicant pays the cost of publication, but the Water Rights Program records require an affidavit or Proof of Publication. Delays in receiving the affidavit can be costly to the applicant.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

June 26, 2012

Capital Journal
PO Box 878
Pierre SD 57501

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 2684-2 to Appropriate Water. Please publish the notice once on July 3, 2012. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is William Anderson, PO Box 205, Kennebec SD 57544 (Ph # 605-869-2496).

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Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

NOTE: TO BE SURE OF PUBLICATION ON
THE CORRECT DATE, CONTACT
THE NEWSPAPER(S) RIGHT AWAY.

June 26, 2012

William Anderson
PO Box 205
Kennebec SD 57544

Dear Mr. Anderson:

Water Permit Application No. 2684-2 for livestock watering use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Lyman County Herald printed at Presho SD (Ph # 605-895-6397) and the Capital Journal printed at Pierre SD (Ph # 605-224-7301). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper(s) to authorize publication of your Notice and to arrange for payment. Early contact with the paper(s) can eliminate delays. Upon receiving authorization from you, the publisher has been instructed to publish your notice. The newspaper has also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

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NOTE: If you plan to contest any part of the Chief Engineer's recommendation, you must file a petition pursuant to the procedures outlined in the attached notice of hearing. The Water Management Board will then consider your concerns during a hearing on the application.

Instruction to Newspaper - Publish the Notice on July 3, 2012. The applicant is responsible for payment. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352 or email: Karen.schlaak@state.sd.us.

NOTICE OF APPLICATION NO. 2684-2 to Appropriate Water

Notice is given that William Anderson, PO Box 205, Kennebec SD 57544 has filed an application for a water permit to impound 93 acre-feet of water from runoff by reconstructing a dam located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 3 with water impounded in the SE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 3; all in T106N-R75W. This application requests impoundment of sufficient water to maintain water to the outlet elevation. The water is for fish and wildlife propagation and livestock water purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2684-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

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The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.

Published twice at the total approximate cost of _____.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

AUG 09 2012

William Anderson
PO Box 205
Kennebec SD 57544

Dear Mr. Anderson:

Enclosed is Water Permit No. 2684-2 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit. Form 10, *Notice of Completion of Works and Application of Water to Beneficial Use*, is enclosed. Please return this completed form after you have finished the system and have put the water to beneficial use. An investigation can then be scheduled so the water license may be issued, thus completing the acquisition of a water right.

An informational sheet *Common Water Right Questions?* is also enclosed. This sheet is intended to answer some of the questions associated with obtaining and keeping a water right.

Sincerely,

Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

Permit No. 2684-2
Missouri River - Water District

Report Of Examination Of Works And/Or Application of Water To Beneficial Use

TO: Chief Engineer, Water Rights Program, DENR, Foss Bldg., Pierre, SD 57501

I have this day, **October 30, 2014**, made a thorough examination of the water use system constructed by **William Anderson** of **PO Box 205, Kennebec, SD 57544** holder of Permit No. **2684-2**, bearing the priority of **June 12, 2012** authorizing the storage of **93** acre-feet of the waters of **runoff** for **fish & wildlife production and livestock water** purposes, in **Lyman** County.

I have to report on the conditions of the same as follows:

A. Works used to divert the water:

A 21 ft. high earthen dam with a normal storage capacity of 93 ac-ft. of water.

B. Works used to transport water to place of use:

N/A

C. Works used to apply water to beneficial use:

A 21 ft. high earthen dam with a normal storage capacity of 93 ac-ft. of water.

The system is in the following condition **good**. The point of diversion is located **550 ft. north & 850 ft. west of the SE corner of Section 3-T106N-R75W (SE ¼ SE ¼) (Lat. 44.00811, Long. -99.80882)**. The works are capable of storing **93** acre-feet of water which is to be used for **fish & wildlife production and livestock water**.

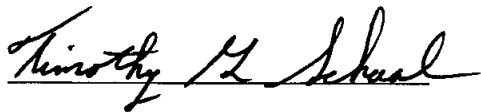
Water has been put to beneficial use to the maximum extent as follows:

A 21 ft. high earthen dam with a normal storage capacity of 93 ac-ft. of water.

and the license should be issued for **93** acre-feet of storage.

Applicable permit qualifications have been complied with: Yes **X**

Exceptions to compliance are: **none** Date Report Completed: **February 13, 2015**



Timothy G. Schaal, P.E.
Engineer IV
SD DENR, Water Rights Program

REPORT ON INSPECTION OF PERMIT NO. 2684-2

DATE OF INSPECTION: October 30, 2014

NAME & ADDRESS OF PERMIT HOLDER: William Anderson, PO Box 205, Kennebec, SD 57544

DIVERSION POINT LEGAL LOCATION: 550 ft. north & 850 ft. west of the SE corner of Section 3-T106N-R75W (SE ¼ SE ¼) (Lat. 44.00811, Long. -99.80882).

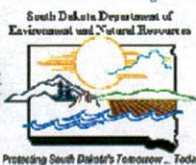
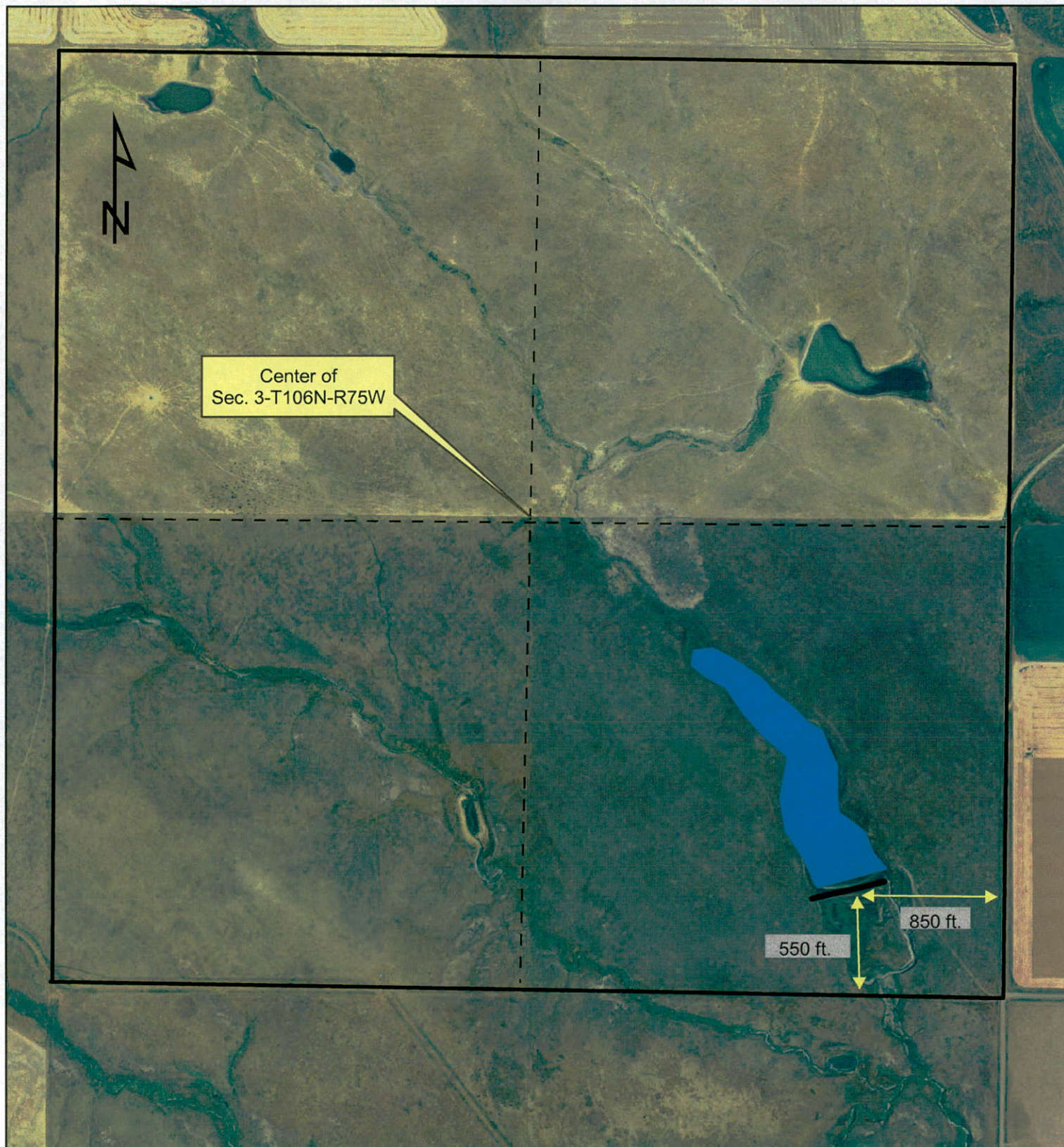
DAM INFORMATION:

- 1) Height to crest 21 feet
- 2) Height to primary spillway 15.3 feet
- 3) Height to secondary spillway 18 feet
- 4) Crest width 12 feet
- 5) Crest length XXX feet
- 6) Spillway length XXX feet
- 7) Spillway width 100 feet
- 8) Approx. storage (Normal) 93 acre-feet
- 9) Approx. storage (Maximum) 288 acre-feet
- 10) Date constructed: 2012

PERMIT QUALIFICATIONS AND REGULATIONS:

- 1) Soil and water permit lands agree with lands being irrigated and lands listed on permit N/A
- 2) Special qualifications to permit being abided by yes
- 3) All structures, wells and lands on map yes
- 4) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period N/A

Water Permit Application No. 2684-2



Timothy G. Schaal

Timothy G. Schaal, P.E.
Engineer IV
SD DENR, Water Rights Program

2/13/15

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 2684-2

(1) William Anderson, PO Box 205, Kennebec SD 57544 made Application No. 2684-2, June 6, 2012 for a water permit to impound 93 acre feet of runoff water by reconstructing a dam located in Lyman County, South Dakota for fish and wildlife propagation and livestock watering purposes. Permit No. 2684-2, with a priority date of June 6, 2012 was approved July 16, 2012 and issued to the applicant for impoundment of water with construction of the project to be completed on or before July 16, 2017 and for the application to beneficial use of said water on or before July 16, 2021.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the project and is entitled to impound 93 cubic feet of water per second for beneficial use.

The location of the storage dam (spillway) is 550 feet north and 850 feet west of the SE corner of Section 3, T106N, R75W (SE ¼ SE ¼). Water is impounded in the SE ¼ Section 3, T106N, R75W.

(3) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use.

(4) Pursuant to South Dakota Water Law 46-5-30.1 William Anderson, PO Box 205, Kennebec SD 57544 the holder and/or owner of Water Right No. 2684-2 is issued a license to appropriate water, the right to impound 93 acre feet of runoff water in a storage dam with a priority date of June 6, 2012 from the location specified in (2) of this license for fish and wildlife propagation and livestock watering purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 2684-2 and subject to the following qualifications:

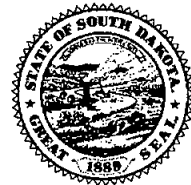
- Water Right No. 2684-2 authorizes an impoundment with a storage capacity of 93 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation.
- Low flows as needed for downstream domestic use, including livestock water and prior water rights must be bypassed.



Jeanne Goodman, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

MAR 19 2015

date





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

MAR 19 2015

2684-2

William Anderson
PO Box 205
Kennebec SD 57544

Dear Mr. Anderson:

Enclosed is Water License No. 2684-2. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

As long as you use the water beneficially, as stated in the Water License, State Water Laws provide that you have a continuing right to use the water.

Sincerely,

Jeanne Goodman, Chief Engineer
Water Rights Program
(605) 773-3352

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